Content Management Software

Spycer

Version 1.2

User Guide

Spycer User Guide

Introduction

Basics

Getting Started

Browsing and Searching

Previewing Data

Working with Metadata

Management Tools and Job List

Miscellaneous

Appendix

Index

User Guide Version 1.2 for Spycer Version 1.2

Copyright © 2006-2007 by DVS Digital Video Systems GmbH, Hanover. All rights reserved.

The manuals as well as the soft- and/or hardware described here and all their constituent parts are protected by copyright. Without the express permission of DVS Digital Video Systems GmbH any form of use which goes beyond the narrow bounds prescribed by copyright legislation is prohibited and liable to prosecution.

This particularly applies to duplication, copying, translation, processing, evaluation, publishing, and storing and/or processing in an electronic system.

Specifications and data may change without notice. We offer no guarantee that this documentation is correct and/or complete. In no event shall DVS Digital Video Systems GmbH be liable for any damages whatsoever (including without limitation any special, indirect, or consequential damages, and damages resulting from loss of use, data, or profits, or business interruption) arising out of the use of or inability to use the hardware, software and/or manual materials.

Those parts of this documentation that describe optional software or hardware features usually contain a corresponding note. Anyway, a lack of this note does not mean any commitment from DVS Digital Video Systems GmbH.

ADIC and StorNext are registered trademarks of Advanced Digital Information Corporation (ADIC). Apple, Mac, Mac OS, and QuickTime are trademarks of Apple Computer, Inc., registered in the U.S. and other countries. CLIPSTER, DVS and Spycer are registered trademarks of DVS Digital Video Systems GmbH. Kodak and Cineon are trademarks of Eastman Kodak Company. Linux is a registered trademark of Linus Torvalds. Microsoft, Windows, Windows Server, and Windows Vista are registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. SUSE is a trademark of Novell, Inc. in the United States and other countries. IRIX and SGI are registered trademarks of Silicon Graphics, Inc.

Any other product names mentioned in this documentation may be trademarks or registered trademarks of their respective owners and as such are subject to the usual statutory provisions.

Headquarters:

DVS Digital Video Systems GmbH
Krepenstr. 8
30165 Hannover
GERMANY

Phone:	+49-511-67807-0
Fax:	+49-511-630070
E-mail:	info@dvs.de
Internet:	http://www.dvs.de

Support:

Phone:	+49-511-67807-25
Fax:	+49-511-67807-31
E-mail:	support@dvs.de

For the Americas:

U.S. Headquarters:

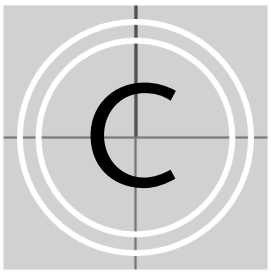
DVS Digital Video, Inc.
300 East Magnolia Boulevard, Suite 102
Burbank, CA 91502
USA

Phone:	+1-818-846-3600
Fax:	+1-818-846-3648
E-mail:	info@dvsus.com
Internet:	http://www.dvsus.com

Support:

E-mail:	support@dvsus.com

Contents



1 Introduction 1-1

1.1 Overview 1-3
1.2 Target Group 1-4
1.3 Conventions Used in this User Guide 1-4
1.4 Program Variants of Spycer 1-6
1.5 System Requirements 1-8
1.6 New in Spycer Version 1.2 1-9

2 Basics 2-1

2.1 Key Features of Spycer 2-2
2.2 Software Structure 2-4
2.2.1 The User Interface 2-5
2.2.2 SpycerAgent 2-5
2.2.3 SpycerNet 2-7
2.2.4 Notes about Networking with Spycer 2-8
2.3 License Issues 2-10
2.3.1 The Dongle 2-10
2.3.2 Floating License 2-13

3 Getting Started 3-1

3.1 Installing the Software 3-2
3.1.1 Installation under Linux 3-2
3.1.2 Installation under Mac OS 3-4
3.1.3 Installation under Windows 3-5
3.2 Starting the Software 3-7
3.2.1 Starting the Software under Linux 3-7
3.2.2 Starting the Software under Mac OS 3-7

3.2.3 Starting the Software under Windows 3-8
3.3 Initial Setup of Spycer 3-9
3.3.1 General Settings 3-9
3.3.2 Watch Folder Settings 3-11
3.3.3 Sequence File Types Settings 3-13
3.3.4 Remote Access Permissions 3-14
3.3.5 Finishing the Setup 3-15
3.4 Overview of the User Interface 3-16
3.5 The Integrated Spycer 3-18
3.5.1 Starting the Integrated Spycer 3-18
3.5.2 Using the Integrated Spycer 3-19
3.5.3 Configuring the Integrated Spycer 3-20
3.5.4 Exiting the Integrated Spycer 3-21
3.6 Changing the Layout of the User Interface 3-22
3.7 Exiting the Software 3-23

4 Browsing and Searching 4-1

4.1 Browsing for Data 4-2
4.1.1 The Directory Tree 4-3
4.1.2 The Directory Controls 4-5
4.1.3 The Contents Area 4-6
4.1.4 The Status Bar 4-9
4.1.5 The Context Menu 4-9
4.1.6 Using the Browse Tool 4-13
4.2 Searching for Data 4-16
4.2.1 The Search Parameter Area 4-16
4.2.2 The Results Area 4-19
4.2.3 Using the Search Tool 4-20

5 Previewing Data 5-1

5.1 Previewing Data via Thumbnails 5-2
5.2 Previewing Data with the Preview Area 5-4
5.2.1 General Information about Proxies 5-4
5.2.2 The Video Overlay 5-5
5.2.3 The Scrub Bar 5-6
5.2.4 The Preview Controls 5-6
5.2.5 The Status Bar 5-7
5.2.6 Using the Preview Area 5-8

6 Working with Metadata 6-1

6.1 Displaying Metadata 6-2
6.2 The Metadata Controls 6-3
6.3 Metadata Views 6-5
6.3.1 File Metadata 6-5
6.3.2 Header Data 6-6
6.3.3 Production Metadata 6-8
6.4 Working with Metadata 6-10
6.4.1 Altering the Header Metadata 6-10
6.4.2 Changing the Production Metadata 6-11

7 Management Tools and Job List 7-1

7.1 The Management Tools 7-2
7.1.1 Renaming 7-2
7.1.2 Defragmenter 7-4
7.1.3 High-Speed Copying 7-7
7.1.4 File Format Converter 7-8
7.1.5 Calculator 7-10
7.2 The Job List 7-12

8 Miscellaneous 8-1

8.1 The Properties Window 8-2
8.2 Configuring Spycer 8-4
8.2.1 Accessing the Configurations and Overview 8-4
8.2.2 The Group 'General' 8-5
8.2.3 The Group 'Jobs' 8-8
8.2.4 The Group 'Network Drives' (Windows Only) 8-10
8.2.5 The Group 'Permissions' 8-11
8.2.6 The Group 'Scan Filter' 8-13
8.2.7 The Group 'Watch Folders' 8-13
8.3 Menu Bar Reference 8-16
8.3.1 The Menu Bar on Mac OS 8-16
8.3.2 The 'Spycer'/Spycer Icon Menu 8-17
8.3.3 The 'Options' Menu 8-18
8.3.4 The 'Tools' Menu 8-18
8.3.5 The 'View' Menu 8-19
8.3.6 The 'Help' Menu 8-20

8.4 Maintenance 8-22
8.4.1 The SpycerAgent Script/Tool 8-22
8.4.2 The CodeMeter Control Center 8-25
8.4.3 Gathering Diagnostic Information 8-26

A Appendix A-1

A.1 Troubleshooting A-2
A.2 Supported File Formats A-4
A.3 Keyboard Shortcuts A-8
A.4 Interesting Files and Folders A-9

I Index I-1

Introduction

This document describes Spycer, the innovative data and content management application developed by DVS. It is a software program capable of handling large amounts of video data and their corresponding metadata, providing users with integrated browse, search and management tools to retrieve data and gather information about them locally as well as via a network.

The video and film post production industry often deals with massive amounts of data stored on centralized storages or circulating on client stations. For most projects it is a challenge to keep track of the different shots and takes during the various production stages. With Spycer you can easily maintain transparency and control over video and audio data and their corresponding metadata. Accompanied by a conclusive rights management, browsing, searching and viewing of video and audio material can be done without any difficulty and metadata, even in DPX file headers, can be added and edited effortlessly. Several management tools supplement the usage of Spycer comprising, for example, a renaming function for image sequences, an integrated high-speed copying process and a sophisticated defragmentation of image sequences.

All the above said can be achieved on the respective computer system locally with one Spycer alone, but the real benefit comes when several Spycer applications operate combined in a network. Then they form the SpycerNet, a scalable distributed content management network for data search and retrieval. For example, the instant a Spycer application detects new clips on its local storage (the watched folders) they and their metadata are made available to all other Spycer applications present in the network immediately. Furthermore, to perform management tasks such as a defragmentation or a copying your Spycer may be controlled by other Spycer applications or you may control others available in the SpycerNet. Of course, all these behaviors can be fully configured via rights management.

Spycer can be run on a standard computer system and does not require any special DVS hardware. On the CLIPSTER and the Pronto2K.2 / ProntoHD.2 video systems it is already integrated in the DVS software and accessible the same way as the other software modules such as the Edit Tool.

There are several different variants of Spycer available, from Spycer Basic providing a limited feature set to Spycer for DVS-SAN able to access storages in the StorNext file system (SNFS). For further information about the different variants please refer to section “Program Variants of Spycer” on page 1-6.

1.1 Overview

This user guide informs you about the installation and general handling of Spycer as well as about its complete controllable interface. The chapters in this user guide contain the following information:

Chapter 1	Begins with a short introduction to Spycer, followed by a note regarding the audience this manual is written for and an explanation of the conventions used in this manual. Furthermore, it details the new features, the available software variants and their respective capabilities, as well as the system requirements necessary to run Spycer when it is not already installed.
Chapter 2	This chapter provides basic information about Spycer. First the key features of Spycer are described, followed by some background information regarding the software structure of Spycer and license issues.
Chapter 3	Describes the first steps to get started with Spycer. In this chapter you can find details about how to install the program, how to perform its first setup as well as about how to start and end it. This is complemented by a first overview of the user interface of Spycer as well as information about the program variant integrated in the CLIPSTER and the Pronto2K.2 / ProntoHD.2 software.
Chapter 4	Explains the browse and search tools of Spycer.
Chapter 5	Provides a description where and how to preview video and image data in the software.
Chapter 6	This chapter explains how to work with metadata, i.e. how to view and how to edit them.
Chapter 7	Describes the management tools that come with Spycer, such as the renaming of image sequences, the built-in defragmenter and the calculator. Furthermore, this chapter provides information about the job list of Spycer.
Chapter 8	Details other items of the software, such as the configuration settings available for Spycer or the options provided by its menu bar.

Appendix	Gives additional information about the software. Among others you can find here a list of the directly supported file formats and troubleshooting issues.
Index	This chapter facilitates the search for specific terms.

1.2 Target Group

To use this user guide and Spycer correctly you should have experience in PC handling. For the full use of the software it would be best to have some knowledge in the field of digital video and its accompanying metadata.

1.3 Conventions Used in this User Guide

The following typographical conventions will be used in this documentation:

- Texts preceded by this symbol describe activities that you must perform in the order indicated.

– Texts preceded by this symbol are parts of a list.

Texts preceded by this symbol are general notes intended to facilitate work and help avoid errors.

You must pay particular attention to text that follows this symbol to avoid errors.

“ ” Texts enclosed by quotation marks are references to other manuals, guides, chapters, or sections.

’Window’	Text in bold with single quotation marks indicates a window name
BUTTON	Text in small caps and bold indicates push buttons
Group/Menu	Text in italic and bold indicates either a group name, menu name or options in a menu list
Menu » Option	In the specified group or menu select the stated item

Item	Text in bold only stands for other labeled items of the user interface
File	Directory structure or file
Entry	Parameters, selections or entries made in the program, or commands entered at a prompt
[Key]	An individual key or a key combination on a keyboard

Keyboard Shortcuts

To perform options or procedures with the keyboard often requires simultaneous pressing of two keys.

Example:

[Ctrl + F1]	If this is given, hold down the [Ctrl] key and press simultaneously the [F1] key.

Screenshots

The screenshots shown in this documentation have been taken for the most part from the Windows-based version of Spycer in its standard stand-alone application variant providing a full feature set (SAN access included). Depending on the software variant available to you and the installed operating system, your Spycer application may look different and/or may not provide all the features described here. However, due to the fact that the descriptions given here and their screenshots are complete, they will contain the interface items that concern your variant and/or operating system as well.

1.4 Program Variants of Spycer

Spycer is available in several different program variants, from Spycer Basic providing a limited feature set to Spycer for DVS-SAN able to access storages in the StorNext file system (SNFS). This section details the available variants, their differences and their capabilities.

The stand-alone variants Spycer Basic and Spycer are the same application differing only in their licensed features. To run a Spycer Basic as Spycer you need an appropriate license provided by a dongle. See section “License Issues” on page 2-10 for further details about the dongle and licenses.

The following lists the available variants:

Spycer Basic	'Spycer Basic' is available for free. Compared to the other program variants it provides a limited feature set (see table 1-1 on page 1-7). Together with Spycer it is the stand-alone application that can be run on a standard computer system (see section “System Requirements” on page 1-8).
Spycer	'Spycer' is the standard version of the Spycer application. It is the stand-alone application that can be run on a standard computer system (see section “System Requirements” on page 1-8). It provides the complete feature set with the exception that it cannot perform a file management or scanning of data on storages in the StorNext file system (SNFS).
integrated Spycer	This variant of Spycer is integrated in the CLIPSTER and the Pronto2K.2 / ProntoHD.2 software. As the standard variant of Spycer ('Spycer') it provides the complete feature set and, furthermore, works seamlessly together with the available DVS products (see section “The Integrated Spycer” on page 3-18).
Spycer for DVS-SAN	This Spycer application variant can be found on SAN systems. Compared to the standard variant of Spycer ('Spycer') it is also capable of managing and scanning data on storages in the StorNext file system (SNFS).
SpycerBox (for DVS-SAN)	This Spycer application variant is a special version for the SpycerBox system by DVS. It provides preview proxies of a connected SAN system for downloads to other Spycers in the SpycerNet.

The next table details the features of the different Spycer application variants:

Table 1-1: Features of the program variants

	Spycer Basic	Spycer	integrated Spycer	Spycer for DVS-SAN	SpycerBox (for DVS-SAN)
Requirements		dongle or floating license	DVS hardware	dongle and DVS-SAN	SpycerBox hardware
Local and SpycerNet browsing/searching	X	X	X	X	X
Watch folders on SAN volumes				X	X
Remote control this Spycer via SpycerNet		X	X	X	X
Remote control other Spycer applications via SpycerNet		X	X	X	X
Renaming of image sequences		X	X	X	X
Editing of metadata		X	X	X	X
High-speed copying		X	X	X	X
Built-in defragmenter		local storage	local storage	local storage, SAN	local storage, SAN
File format converter		X	X	X	X
Generation of preview proxy clips		X	X	X	X

This user guide describes all possible features that a Spycer application may provide, thus covering all above mentioned variants. The feature set of Spycer Basic is limited as detailed above. However, because the descriptions given here are complete, its functions are explained as well. In case one feature is available for a particular variant only, it will be explicitly mentioned in the text.

1.5 System Requirements

The stand-alone application of Spycer ('Spycer Basic' and 'Spycer', see section "Program Variants of Spycer" on page 1-6) is able to run on a standard computer system that fulfills the following system requirements:

Supported Hardware

These are the minimum hardware requirements that the computer system has to meet if you want to use the program:

- 2 GHz processor recommended
- 512 MB of RAM
- 50 MB free space on system disk
- CD-ROM drive
- Graphic card (minimum resolution 1024 × 768)
- Network card for communication between Spycer applications (SpycerNet)
- FC card to connect to a SAN (if required)

To run a Spycer Basic as Spycer without floating licenses you will also need one free USB port for the dongle to enable the licensed feature set. See section "License Issues" on page 2-10 for further details about the dongle and licenses.

Supported Operating Systems

The program can be executed on the following operating systems:

Be sure that you have installed the newest service packs and/or patches for your system, otherwise you may encounter soft- and/or hardware problems.

- Linux (SUSE Linux Enterprise Server 10 or SUSE Linux Enterprise Desktop 10)
- Mac OS X
- Windows 2000, Windows Server 2003, Windows XP (recommended), or Windows Vista

Other Requirements

The following other requirements may be necessary to run Spycer:

- *Mac/Windows only:* QuickTime Version 7.1.0 or higher to display `*.mov` files
- *Mac/Windows only:* QuickTime plug-in for DNxHD content in `*.mov` files
- License to run the program with a licensed feature set (dongle or floating license, see section "License Issues" on page 2-10)

1.6 New in Spycer Version 1.2

The following lists the features and functions that are new in Spycer:

- Spycer displays all files stored in the watched folders, even files of unknown formats, and to each file separate production metadata can be added.
- New and enhanced icons to indicate systems, drives, directories and files (e.g. one icon shows systems in the SpycerNet where older Spycer versions are running).
- Copying of data within the SpycerNet, even between peers with different operating systems.
- Files can be loaded in other applications from the browse and search area.
- File format converter for image files and video clips.
- To locate files after a search more easily, they can be shown directly in the directory tree of the browse tool.
- It can be configured which file formats to display as video clips (i.e. as image sequences showing one file entry in Spycer only).
- Preview area with integrated media player for video clips.
- For a real-time preview of clips, proxy clips can be generated of the locally available material. When viewing clips over the SpycerNet, the proxies will be temporarily downloaded from the other system.
- Enhanced properties dialog for peers as well as volumes and content.

Please note that older Spycer versions available in a SpycerNet do not provide the above mentioned features. File related tasks or further information due to new features may not be available on systems with older Spycer versions, even if triggered from a newer application version in the SpycerNet.

Basics

This chapter provides basic information about Spycer. First concise descriptions of the key features of Spycer are given. This is followed by some background information about the software structure providing details about the user interface, the SpycerNet and the SpycerAgent in particular. The chapter will be concluded with details and explanations of some license issues regarding Spycer.

2.1 Key Features of Spycer

Spycer is a software program for content management especially designed for the needs of the Digital Intermediate post production. It is capable of handling large amounts of video and audio data as well as their corresponding metadata, either locally stored or distributed on several systems connected to a network. Additionally, Spycer is equipped with powerful tools such as a high-speed copying and a sophisticated defragmenter. The following lists and explains shortly the key features of Spycer:

There are several variants of Spycer available. Further information about them can be found in section “Program Variants of Spycer” on page 1-6.

Browse and Search

With Spycer you can browse local or network storages via the SpycerNet. It offers you two browsing panes where you can browse for data and perform move/copy procedures between different directories easily via drag and drop. With its search tool you can find the desired material swiftly by combining various parameters, such as file names or metadata information. All material and data displayed in the browse and search area can be shown either in text information or thumbnail view.

Viewing of Material

You can preview video clips and image data without any difficulty in Spycer. They can be viewed either with their thumbnails in the browse or search area or, when double-clicked, in the enlarged preview area. Both, the thumbnails as well as the preview area, provide a scrub bar (timeline) where you can move to different positions within a video clip's sequence. Once video material is available in the preview area, you may also use the built-in media player for a viewing (real-time preview requires a proxy of the clip) or gather further information about it in the metadata area. Other files than video or image data can be selected and may provide information in Spycer as well: For example, when a project file of a DVS video system software is singled out, you can see the media files that are used in the project's timeline as a list in the metadata area.

Adding and Editing Metadata

After data is selected and shown in the preview area, its metadata, such as the header data or production information, are displayed as well. Then they can be added or changed easily. The background process of Spycer enabling the local content management also administers the metadata and alters the file header(s) and/or the respective data record

of the file/sequence in its database. With them added you can afterwards search for specific metadata with Spycer's search tool.

Management Tools

Spycer is equipped with several management tools such as a high-speed copying or a sophisticated defragmenter:

To copy vast amounts of video material from one storage location to another is often a time consuming procedure when performed with the standard tools of an operating system, such as a file manager. To do this faster DVS integrated in Spycer a high-speed copying program which deals with such tasks in about four times the speed of a standard operating system copy.

The built-in defragmenter of Spycer has been designed to optimize the physical alignment of image sequences (video clips) on storages so that they are more suited for real-time operations. It defragments any other data available on the selected storage as well. With Spycer you can initiate a defragmentation of one or more clips/files without any difficulty.

Spycer also offers a renaming tool for image sequences where you can easily change, for instance, the name prefixes, frame numbers or file extensions.

There is also a file format converter available allowing you to convert video and image data from one file format to another.

SpycerNet

One Spycer can perform all the above said on the computer system where it is installed locally. But as soon as there are several Spycer applications installed on different computers and when they are able to communicate with each other via a network connection, you may access them and their data depending on the permissions for a remote access. By communicating with each other, sharing their databases and enabling a remote control of the applications for management tasks such as copying or defragmentation, they form the SpycerNet, a scalable distributed content management network for data search and retrieval.

Rights Management

Each Spycer contains a rights management to allow other Spycer applications in the network (SpycerNet) access to its data or a remote control of it. For example, the browse and search permission enables others to take a look at your data and metadata (i.e. they have access to the database of the watched folders which is created and administered by the background process), while read and write permissions enable them to control your Spycer application for system specific tasks such as a copying or defragmentation.

2.2 Software Structure

The following provides basic information about the software structure of the Spycer application to help you understand how the software operates.

In its parts the Spycer application consists of three elements that together provide the software's capabilities:

- the user interface,
- the SpycerAgent and
- the SpycerNet.

While the first two are software components actually installed on the computer, the latter is the means of communication between different Spycer installations in a network enabling the scalable and distributed content management. The following diagram shows the software structure and communication processes between the individual elements of Spycer applications in a SpycerNet in detail:

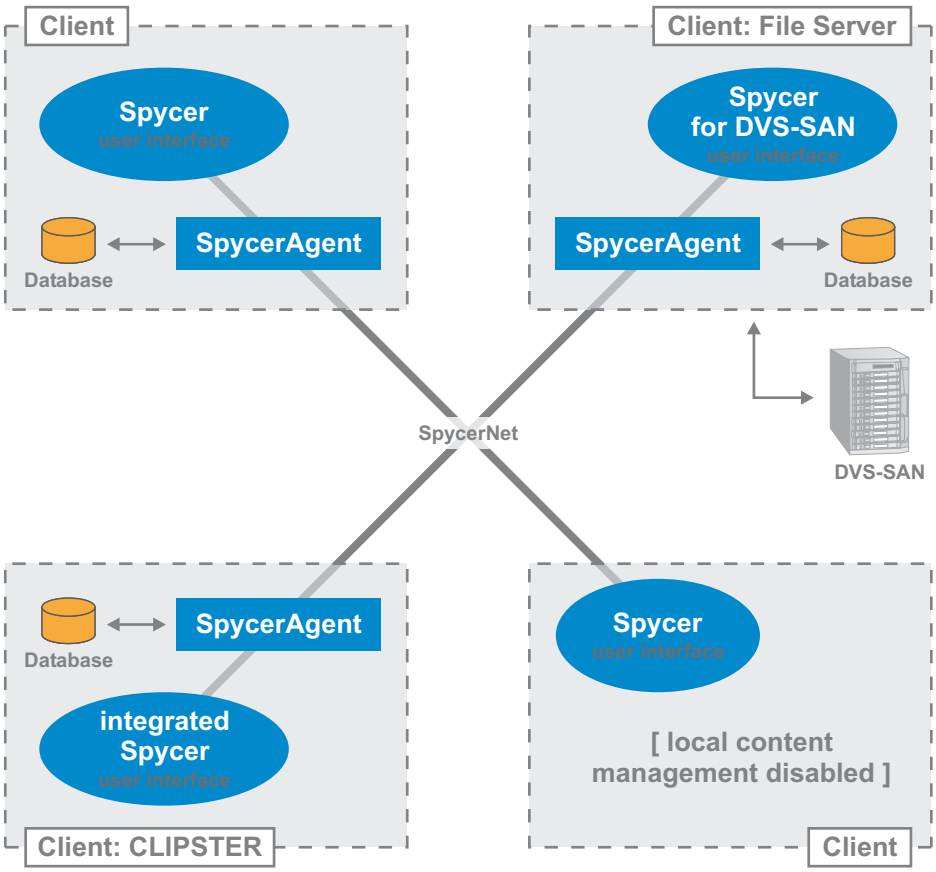


Figure 2-1: Overview of the software structure

The ovals in the drawing above represent the user interfaces of the Spycer applications, while the lines indicate the communication ways

on the individual clients as well as between them in the SpycerNet. It is of no consequence to the SpycerNet whether the software applications are all of the same variant of Spycer or not (see section “Program Variants of Spycer” on page 1-6).

The following sections will explain the drawing above in more detail.

2.2.1 The User Interface

With the user interface of Spycer you can view, edit and administer the data shown in its areas and/or tools, for example, you can browse and search for data or edit their metadata. It can be used to display the contents that is locally available and furthermore, when operating in a SpycerNet, it may also show the material that is stored on other systems.

To put it in simple terms the user interface of Spycer is just a browsing tool where you can view data and trigger certain events that the background process SpycerAgent may execute. In case it is running without the background process enabled (as the bottom right Spycer in figure 2-1 on page 2-4 indicates), the user interface can still be used as a network browser in the SpycerNet to display data available on other systems.

Because the user interface runs independently from the SpycerAgent it will check separately whether a valid license is provided. When found it will run with the respective feature set enabled (see section “License Issues” on page 2-10).

For further information about the background process SpycerAgent, the SpycerNet and networking see the next sections.

2.2.2 SpycerAgent

To scan and display any data locally stored on your computer system the Spycer application installs a background process (*Mac/Windows:* service, *Linux:* daemon) called SpycerAgent right after the first program start. It will be launched in the background of the system and in the future start automatically during the loading of the operating system.

The SpycerAgent administers a database that contains all worthwhile information about the contents of the watched folders (the scanned and indexed local storages), such as file names, storage location, pixel formats, color spaces, or metadata. This database is then used in the user interface of Spycer to display video and audio material as well as all other data. By using a database to present the contents of storages Spycer offers you fast access to large amounts of data, for example, for search procedures. Once the database is created, the SpycerAgent monitors the watched folders, for example, for new files, deletions, re-

namings, etc., whereupon the local database of Spycer is revised so that it is always up-to-date with the actual content stored.

The very first writing of the database may take some time depending on the amount of data stored in the watched folders.

Further information about the watched folders can be found in section “Watch Folder Settings” on page 3-11.

The SpycerAgent is an important part of the SpycerNet. On the one hand it makes the data in the database available to the user interface installed locally and on the other to all other Spycer applications in the network (if browse and search permissions are given, see section “Remote Access Permissions” on page 3-14). Without it only the data provided by other SpycerAgents in the network can be seen and accessed. Thus, it is the database that will be visible to other Spycer user interfaces in the SpycerNet.

Furthermore, the SpycerAgent controls the Spycer application tasks on your system such as copy or defragmentation processes. Usually, these are initiated by the user interfaces in the SpycerNet. Locally you can perform read and write as well as browse, search and edit processes as desired: The user interface triggers the event and the SpycerAgent carries them out. Nevertheless, when operating in a SpycerNet and initiating a Spycer application task on another system, it may be denied by the other Spycer due to insufficient remote access permissions. Then the access rights have to be set accordingly on the systems where you want to perform the task (see section “Remote Access Permissions” on page 3-14).

The SpycerAgent runs totally independent of Spycer’s user interface. It is started automatically during the loading of the operating system and, when not terminated otherwise, it is stopped when the operating system is turned off. This makes it possible to maintain the SpycerNet almost at all times. Even with no user logged in to the system and no Spycer user interface running, other Spycer user interfaces will be able to search and browse in your data (if permitted on your system). Copy or write procedures on your system initialized by other Spycer are possible as well and all processes are written to the database by the SpycerAgent soon after they occurred.

Because the SpycerAgent runs independently from the user interface it will check separately whether a valid license is provided. When found it will run with the respective feature set enabled (see section “License Issues” on page 2-10).

With the local content management (i.e. the SpycerAgent) enabled, Spycer not only displays the data scanned and indexed in its database. The viewing or reading of the contents of other drives or directories on your system (local reading) as well as of mounted network drives is possible even without their contents added to the database. The user interface displays all data available when selected in its browsing pane.

However, because the contents of these locations are not detailed in the database, they are read when accessed only and neither will a search with Spycer include these locations nor will they be visible in the SpycerNet. File-based tasks on these drives/directories locally performed, such as copy procedures to and from these drives/directories or the deletion of directories or files, are also possible.

To administer the background process DVS offers you a tool (*Linux/Mac:* script) especially designed for this purpose. Please refer to section "The SpycerAgent Script/Tool" on page 8-22 for more details about this. Nevertheless, the standard operating system tools to administer a background process can be used as well.

To administer the background process administrator rights (*Linux/Mac:* root) are required.

2.2.3 SpycerNet

The SpycerNet is one of the main features of Spycer. It is the part of the software that constitutes the scalable and distributed content management.

With a single Spycer application you can access data locally stored only. But if there are more than one Spycer installed on different computer systems connected via a network, they will form the SpycerNet. Then they communicate with each other and share their databases providing information about the data stored locally on each system. The more Spycer applications are installed, the more data you can gather from different systems. This is meant by the terms 'scalable' and 'distributed': 'scalable' because there is no limit to the number of Spycer applications working together and 'distributed' because they work independently on separate workstations as well as provide separate databases.

This way no central server is required because the individual Spycer installations communicate with each other and share their databases as soon as they are present in the network and browse and search permissions are given.

In the SpycerNet you will be able to use your Spycer user interface to access data on other systems or you may use their SpycerAgents for certain operations (read, write, defragment) depending on the permissions assigned for a remote access. Thus you can easily maintain transparency and control over all video and audio data in your post production workflow, even if distributed on various client stations.

To configure a Spycer application to take part in the SpycerNet an IP address other than the local host address has to be stated in the network settings of Spycer (see section "General Settings" on page 3-9). For further information about the conditions necessary to establish a

SpycerNet see section “Notes about Networking with Spycer” on page 2-8.

2.2.4 Notes about Networking with Spycer

Newer versions of Spycer usually provide features that older applications may be missing. Due to the fact that it is the native SpycerAgent which performs file related tasks, it may not be possible to trigger later developed functions on older Spycer applications in the SpycerNet. For a list of what is new in this Spycer version see section “New in Spycer Version 1.2” on page 1-9.

The SpycerNet is best set up in a way that the overall workload is distributed over the client stations. If working with a central storage (e.g. a SAN) only one Spycer should provide the database for this storage. This is one of the major features of Spycer: Not every system has to scan the central storage but only one which will share its database in the SpycerNet. This will reduce the overall traffic greatly because only one Spycer monitors the central storage.

Furthermore, each Spycer contains a basic rights management to allow other Spycers in the SpycerNet access to your data or a remote control of the SpycerAgent installed. The permissions what other Spycers are allowed to do on your system (as well as all other settings mentioned in this section) have to be stated during the initial setup of the software (see section “Initial Setup of Spycer” on page 3-9). Of course, they can be altered at any time later without difficulty (see section “Configuring Spycer” on page 8-4).

Listed in the following are some basics regarding the role of your Spycer application in a SpycerNet:

The following network ports have to be free and available to connect successfully to the SpycerNet:

- Port 9960 UDP
- Port 9961 TCP
- Port 9970 UDP
- Port 9971 TCP

See to it that these ports are free in your network (e.g. as exceptions in the firewall settings) otherwise Spycer will be confined to its localhost only (IP address 127.0.0.1 has to be used). In case of problems or questions please contact your local network administrator.

When the local content management is disabled, i.e. the SpycerAgent is not installed on your system:

– Your Spycer application will not appear in the SpycerNet regardless of any other setting.

– Your Spycer user interface will not show any files locally stored nor can mounted network drives be accessed.

When the local content management is enabled:

– If set to localhost, your Spycer will not appear in the SpycerNet regardless of the permissions given.
– With no permissions given and when an IP address is stated other than the localhost address, your Spycer application will be registered in the SpycerNet but provide no data.
– With permissions given and when an IP address is stated other than the localhost address, your Spycer application will be registered in the SpycerNet. Other Spycer applications can perform at least browse and search operations in your database.

The browse and search permissions enable others to take a look at your data and metadata, i.e. they have access to the database administered by the SpycerAgent. However, with only this permission given they cannot change the contents of your database nor have they a real access to your system: They see the contents of the database only and, if available on your system, can download proxy clips.

With the 'Edit metadata' permission activated you enable others in the SpycerNet to change metadata entries of the files in your watched folders (file headers as well as database entries). This permission includes the browse and search permission but still a real access to your system is denied.

All other permissions enable them to control your SpycerAgent for file related tasks such as a copying or defragmentation. This is meant by remote controlling other Spycers. For moving or copying operations you must have at least read permissions on the source system and write permissions on the target system. Nevertheless, real damage can only be done with the write permission, because with it you can, for example, rename file sequences or delete data.

2.3 License Issues

On DVS video devices ex factory equipped with Spycer, such as the DVS-SAN, CLIPSTER and the Pronto2K.2 / ProntoHD.2, the Spycer application is already properly installed and licensed. Then the program can be started immediately.

The stand-alone application of Spycer, however, needs a special license provided by a dongle to run with more than the basic features. In case the dongle is not available or the license is invalid, the stand-alone application runs as Spycer Basic (see section "Program Variants of Spycer" on page 1-6). Additionally, there is also the possibility to acquire a floating license to run a dedicated number of Spycer applications on a single dongle.

The license for a Spycer connected to a SAN system is provided by a special version of the dongle. It also has to be used as described in the following.

You can order license(s) from DVS via the Spycer web sites (www.spycer.net or www.spycer.de).

Details about the license currently assigned to your Spycer application can be found in the **'About Spycer'** window (e.g. for troubleshooting purposes, see section "About" on page 8-20).

This section details some issues that may occur when licensing Spycer.

2.3.1 The Dongle

The license for Spycer to run the Spycer application with a licensed feature set is provided via a dongle (USB stick) that has to be connected to a free USB port on the computer system where Spycer is to be installed (see section "Installing the Software" on page 3-2).

When running a local content management, it is generally recommended to plug in the dongle prior to starting the computer, which will ensure that the SpycerAgent operates with the licensed feature set enabled. Additionally, it should be left connected to the system even when the user interface of Spycer is not running, because otherwise you may disrupt SpycerNet processes running on your system (e.g. a defragmentation). It can be disconnected safely only when the computer system is turned off. Further information about the SpycerAgent

and the SpycerNet can be found in section “Software Structure” on page 2-4.

The user interface of Spycer and the SpycerAgent run independently from each other. Both will check separately whether a valid license is provided to enable the respective feature set (see section “Software Structure” on page 2-4).

You can find enclosed in the delivery of the licensed version of Spycer a special key chain. Please fasten it to the dongle to recognize it later without difficulty as belonging to Spycer.

Mac only: Please note that in some cases your system may not shutdown or boot normally with the dongle plugged in. To solve this problem, unplug the dongle during shutdown or (re-)boot.

How to Connect the Dongle to a Running Computer

When a license is not available, for example, because the dongle is not connected, Spycer (the user interface as well as the background process) will run as Spycer Basic only. To connect the dongle to the computer system afterwards and run Spycer with the licensed feature set enabled you have to perform the following:

- If running close the Spycer user interface (see section “Exiting the Software” on page 3-23).
- Connect the dongle to a free USB port on the computer system.
- Afterwards restart the Spycer user interface (see section “Starting the Software” on page 3-7).

The above steps are enough if a local content management is disabled on your system (SpycerAgent not running). However, if your Spycer application runs with the local content management enabled, during the start-up of Spycer a message will appear informing you about the new detected license. Then you have to do the following in addition:

- Follow the instructions given on the screen necessary to restart the SpycerAgent.

Once the SpycerAgent has started, the background process as well as the user interface of Spycer will run with the licensed feature set enabled.

How to Upgrade Spycer Basic to a Licensed Spycer

To upgrade the free version of Spycer (Spycer Basic) to a licensed version of Spycer without floating licenses available (see section “Floating License” on page 2-13) you will need a dongle that provides a valid license for the application. You can order it from DVS via the Spycer web sites (www.spycer.net or www.spycer.de).

Once you have received the dongle perform the following:

If your computer where Spycer is installed is already running, instead of the following, perform the procedure described in section "How to Connect the Dongle to a Running Computer" on page 2-11.

- Connect the dongle to a free USB port on the computer system where Spycer is installed.
- Next start the system and afterwards the Spycer user interface (see section "Starting the Software" on page 3-7).

When Spycer is started, it will run with the licensed feature set.

How to Update the License on the Dongle

The license on the dongle can be updated, for instance, to enable new features or change an evaluation license to a non-expiring one. For this you have to send a request with internal license information to DVS. In return you will receive an update file which has to be used to program the dongle with a new license. After this the dongle is updated.

To update the license on the dongle do the following in detail:

- Start Spycer (see section "Starting the Software" on page 3-7).
- From its menu bar (see section "Overview of the User Interface" on page 3-16) select ***Tools » License Management » Request...***.

This will open a message window instructing you to connect the dongle to the computer:

- If not already the case connect the dongle to a free USB port on the computer system and click the button **OK** in the message window.

This saves the license information of the dongle to a file with the name *SpycerLicense.WibuCmRaC* (exact location will be detailed in a message window) and simultaneously starts your e-mail software. The saved information will also be added to an e-mail automatically.

- Send the encrypted dongle information to DVS by doing one of the following:
  - If you are connected to the internet send the dongle information already added to the opened e-mail to `dongleupdate@dvs.de`, or
  - copy the file *SpycerLicense.WibuCmRaC* to a common storage medium (e.g. CD-ROM) which you can then send to DVS per mail.

Once received, the e-mail/file will be evaluated by DVS and a license update file with the extension **.WibuCmRaU* will be created. DVS will send this to you as soon as possible.

After receiving the license update file do as follows:

- Store the file on the computer where the dongle is connected.
- If appropriate start Spycer and select from its menu bar ***Tools » License Management » Update…***.

This will open a message window instructing you to connect your dongle to the computer and afterwards select the update file:

- If not already the case connect the dongle to the computer system and click the button **OK** in the message window.
- In the opening window browse for the update file *`*.WibuCmRaU`* on your storage and confirm your choice with the button **OPEN**.

This will program the dongle with the new license which may take some time. Once the programming of the dongle is complete, a message will report this.

- Close the Spycer user interface and restart it to take the changes into effect.

When Spycer is started once again, it will run with the new license.

In case the new license is still not available, you have to reboot your computer with the dongle connected.

If your new license is a floating license you have to configure the dongle as a license server to enable a sharing of the license (see section "Configuring a Dongle to Run as a License Server" on page 2-14).

2.3.2 Floating License

With a floating license you can share the license of a single dongle with other Spycer applications, i.e. enabling a Spycer Basic on another system in the network to run as a licensed version of Spycer. The dongle provides a certain number of licenses for the sharing only and the Spycer applications (user interface as well as SpycerAgent) can grab the licenses from the dongle when they are connecting to the SpycerNet (only one license per system will be assigned). As long as there are licenses available, each Spycer Basic registering in the SpycerNet will then run with the licensed feature set. Once the maximum number of licenses is assigned, every other Spycer Basic connecting to the network will run with the limited feature set only.

To share the license of a dongle in the SpycerNet the dongle has to be configured as a license server. It will then monitor the shared licenses and assign them anew when available again.

Dedicated dongles, i.e. single workstation licenses, and floating licenses can be used together in a SpycerNet.

It is possible to run a dedicated dongle as a license server. However, then you may not be able to start your Spycer with the licensed feature set, because the license may already be grabbed by another application.

How to Get a Floating License

Usually, you can order dedicated licenses and/or floating licenses from DVS via the Spycer web sites (www.spycer.net or www.spycer.de, see also section "How to Upgrade Spycer Basic to a Licensed Spycer" on page 2-11). However, if a dongle is already available, you can convert a dedicated license to a floating licence with the procedure described in section "How to Update the License on the Dongle" on page 2-12.

Configuring a Dongle to Run as a License Server

To enable a floating license and share the license of a dongle in the SpycerNet the dongle has to be configured as a license server. For this perform the following:

- If appropriate start Spycer and select from its menu bar (see section "Overview of the User Interface" on page 3-16) ***Tools » License Management » License Server…***.

This will open the following dialog window:

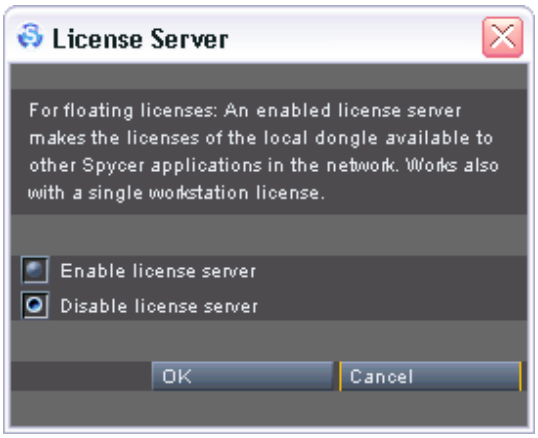

License Server
For floating licenses: An enabled license server makes the licenses of the local dongle available to other Spycer applications in the network. Works also with a single workstation license.
Enable license server
Disable license server
OK
Cancel

Figure 2-2: License server setup

- Activate the **Enable license server** radio button to enable the license server for the connected dongle.

Do not enable the license server if your dongle provides one license (dedicated license) only. Then you may not be able to start your Spycer with the licensed feature set, because the license may already be assigned to another application.

- Confirm your selection with the **OK** button.

After this another message window appears asking you again whether you are really sure about your selection:

- Confirm the setting once more with the button **YES**.
- Next close the Spycer application and restart your system.

Once the system is rebooted, the dongle connected locally to your system will run as a license server offering other Spycer applications licenses to run with the licensed feature set enabled.

To deactivate the license server for the dongle you have to perform the same procedure as mentioned above with the following exception: Instead of selecting the radio button to enable the server you have to activate the radio button **Disable license server**.

How to Grab a License

Licenses are not given only to the user interface of Spycer but the SpycerAgent as well as soon as it is started (local content management enabled, see section “SpycerAgent” on page 2-5). To get one of the licenses provided by a dongle in the SpycerNet do as follows:

- If the computer system where your Spycer application is installed is turned off, simply start it.
- Afterwards start the Spycer user interface (see section “Starting the Software” on page 3-7).

During the loading of the operating system it will ask locally as well as in the network if there is a dongle available and whether it provides a license. If a license is available, it will be handed to the SpycerAgent (if enabled) as well as the user interface of your Spycer application.

Nevertheless, to grab a license with an operating system already running and a Spycer application registering as Spycer Basic you have to do the following:

- If running close the Spycer user interface (see section “Exiting the Software” on page 3-23).
- Next restart the Spycer user interface (see section “Starting the Software” on page 3-7).

During the start-up the Spycer user interface will ask locally as well as in the network if there is a dongle available and whether it provides a license. If a license is available, it will be given to your user interface.

The above steps will be enough to grab a license if a local content management is disabled on the system. However, if your Spycer application runs with the local content management enabled, a message will appear informing you about the new detected license. Then you have to do the following in addition:

- Follow the instructions given on the screen necessary to restart the SpycerAgent.

Once the SpycerAgent has started, the background process as well as the user interface of Spycer will run with the licensed feature set and the procedure to grab a license is finished.

How to Make a License Available again to the Dongle

Licenses are not given only to the user interface of Spycer but to the SpycerAgent as well as soon as it is started (local content management enabled, see section "SpycerAgent" on page 2-5). To make a license available again to a dongle in the network perform the following:

- If running close the user interface of Spycer (see section "Exiting the Software" on page 3-23).

The above step will be enough to give back the license to the dongle if a local content management is disabled on the system. However, if your Spycer application runs with the local content management enabled, you have to do the following in addition:

- With a local content management enabled on your system you have to stop the background process SpycerAgent as well, which can be done either manually, for example, with its script/tool (see section "The SpycerAgent Script/Tool" on page 8-22) or by shutting down the computer system.

Once the user interface and the SpycerAgent are closed, the license of your Spycer application is given back to the dongle and can then be assigned to another Spycer connecting to the network.

Getting Started

This chapter describes how to get started with Spycer. First the installation of the software is described, followed by details how to start the application. When Spycer is started for the first time, it will guide you through some initial configuration settings that you have to specify in order to run Spycer. They will be described next in this chapter. Among them you can find, for instance, the remote access permissions and the network configuration settings. The chapter will be concluded with some more details about the software, such as an overview of the user interface of Spycer, a short description of the program variant of Spycer integrated in the CLIPSTER and the Pronto2K.2 / ProntoHD.2 software as well as an explanation about how to exit the software.

3.1 Installing the Software

The stand-alone application variant of Spycer able to run on a standard computer system (see section “Program Variants of Spycer” on page 1-6) has to be installed first. It is available for several operating systems. This section describes for each available operating system separately how to install Spycer.

On some DVS video devices Spycer is already installed (e.g. on the DVS-SAN, CLIPSTER and the Pronto2K.2 / ProntoHD.2). Then you may skip this section and continue with section “Starting the Software” on page 3-7.

When downloading the Spycer installation files from the Spycer internet sites (www.spycer.net or www.spycer.de), they will usually be available in single archive files. In case you want to install Spycer as Spycer Basic, you need the archive file that contains the Spycer application only. The archive containing the CodeMeter installation (application to recognize and administer the dongle) will not be necessary.

The newest version of the Spycer application can be found on the Spycer internet site (www.spycer.net or www.spycer.de).

3.1.1 Installation under Linux

The installation of a stand-alone Spycer for Linux operating systems normally requires two files:

- The CodeMeter installation file (application to recognize and administer the dongle) and
- the Spycer installation file.

If you are in possession of a licensed Spycer, they usually can be found on the enclosed CD-ROM. With a licensed Spycer it is recommended to install the CodeMeter application first. In case you require Spycer Basic only, you can leave out the CodeMeter installation.

CodeMeter Installation

The CodeMeter application is the application that recognizes and administers the dongle (license). With a licensed version of Spycer it is recommended to install it first:

You can leave out the CodeMeter installation when you intend to run Spycer as Spycer Basic only.

- Fasten the Spycer key chain to the dongle (both are included in the delivery of a licensed version). With this you will be able to identify the dongle belonging to Spycer easily in the future.

- Next, open a command line (shell) and log on to the system as root.
- Then install the CodeMeter application, for example, by entering:

```
rpm -ihv <path>/CodeMeter4<version no.>.
          <OS architecture>.rpm
```

This installs the CodeMeter application on your computer.

- Afterwards plug the dongle into a free USB port at the computer system (see also section “License Issues” on page 2-10).

The dongle providing the license is registered automatically by the CodeMeter application and you will see the dongle as an additional drive on your desktop. After this continue the installation with the installation of the Spycer application.

Spycer Installation

To install Spycer perform the following:

- If applicable, open a command line (shell) and log on to the system as root.
- Then install the Spycer application by entering, for example:

```
rpm -ihv <path>/Spycer_<version no.>.
          <OS architecture>.rpm
```

This installs all necessary files and libraries of Spycer on the computer system.

With this the installation of the software is complete and as a next step you have to perform its initial setup to be able to run the program. It has to be made when the Spycer application is started for the first time (see section “Starting the Software” on page 3-7 and section “Initial Setup of Spycer” on page 3-9), and requires a log-on as root as well. Once this is finished, you can use Spycer with a normal user account.

Under Linux the Spycer application can usually be found in the system menu under the entry ***Audio & Video » Spycer***. It can be deinstalled by entering `rpm -e Spycer` in a command line.

The CodeMeter application can usually be found in the system menu under the entry ***System » CodeMeter Control Center***. It can be deinstalled by entering `rpm -e CodeMeter4` in a command line.

3.1.2 Installation under Mac OS

The installation of a stand-alone Spycer for the Mac operating system usually comes as a single archive file that contains two sets of installations:

- The CodeMeter installation (application to recognize and administer the dongle) and
- the Spycer installation.

If you are in possession of a licensed Spycer, it usually can be found on the enclosed CD-ROM. With a licensed Spycer it is recommended to install the CodeMeter application first. In case you require Spycer Basic only, you can leave out the CodeMeter installation.

CodeMeter Installation

The CodeMeter application is the application that recognizes and administers the dongle (license). With a licensed version of Spycer it is recommended to install it first:

You can leave out the CodeMeter installation when you intend to run Spycer as Spycer Basic only.

- Fasten the Spycer key chain to the dongle (both are included in the delivery of a licensed version). With this you will be able to identify the dongle belonging to Spycer easily in the future.
- Next, open the installation file of Spycer (`Install_Spycer_<version no.>_<OS>.dmg`, e.g. with a double-click of the mouse).

This will mount the Spycer application as a volume and display its content on the screen.

- From this volume open the installation file of the CodeMeter application (`CmRuntimeUser_<version no.>.dmg`, e.g. with a double-click of the mouse).

This as well will mount the CodeMeter application as a volume and display its content on the screen.

- From the last volume install the CodeMeter application by executing its `*.mpkg` file.

The installation routine of the CodeMeter application is started which will guide you through the installation.

- Follow the instructions given on the screen.

The CodeMeter application is then installed on your computer. The installation is finished as soon as a message reports this.

- Afterwards plug the dongle into a free USB port at the computer system (see also section “License Issues” on page 2-10).

The dongle providing the license is registered automatically by the CodeMeter application (this may take some time) and you will see the dongle as an additional drive on your desktop. After this continue the installation with the installation of the Spycer application.

Spycer Installation

To install Spycer perform the following:

- If not already the case, open the installation file of Spycer which will mount it as a volume (`Install_Spycer_<version no.>_<OS>.dmg`, e.g. with a double-click of the mouse).
- From this volume install the Spycer application by executing its `*.mpkg` file.

The installation routine of the Spycer application is started which will guide you through the installation.

- Follow the instructions given on the screen.

This installs all necessary files and libraries of Spycer on the computer system.

With this the installation of the software is complete and as a next step you have to perform its initial setup to be able to run the program. It has to be made when the Spycer application is started for the first time (see section “Starting the Software” on page 3-7 and section “Initial Setup of Spycer” on page 3-9), and requires a log-on with administrator rights (i.e. as root) as well. Once this is finished, you can use Spycer with a normal user account.

3.1.3 Installation under Windows

The installation routine of a stand-alone Spycer for the Windows operating system consists of several files. Usually, they can be found on the enclosed CD-ROM. To begin the installation perform the following:

- If you are in possession of a licensed version of Spycer fasten the Spycer key chain to the dongle (both are included in the delivery of a licensed version). With this you will be able to identify the dongle belonging to Spycer easily in the future.
- Next, if available, plug the dongle into a free USB port at the computer system where Spycer should be installed (see also section “License Issues” on page 2-10).
- Afterwards open a file manager (e.g. Windows Explorer) on the computer system and browse the CD-ROM.
- Execute the installation file of Spycer, for example, with a double-click of the mouse.

This starts the installation routine which will guide you through the installation.

- Follow the instructions given on the screen.

The installation files also comprise the CodeMeter installation (application to recognize and administer the dongle). Right after the installation of Spycer the installation routine for CodeMeter is called automatically. In case you want to use Spycer as Spycer Basic only, you may abort the installation of the CodeMeter application.

During the installation procedure all necessary files and libraries will be installed on the computer system. The installation is finished as soon as a message reports this.

With this the installation of the software is complete and as a next step you have to perform its initial setup to be able to run the program. It has to be made when the Spycer application is started for the first time (see section “Starting the Software” on page 3-7 and section “Initial Setup of Spycer” on page 3-9).

3.2 Starting the Software

This section provides you with a description how to get Spycer started. Because the software can be run under several operating systems, it is divided into the different starting procedures for each supported operating system.

On the CLIPSTER and the Pronto2K.2 / ProntoHD.2 video system Spycer is by default integrated in the DVS software and thus not needed as a stand-alone application. To start the software there you have to start the respective DVS software (see section “Starting the Integrated Spycer” on page 3-18).

The very first starting of the software will launch its initial setup necessary to run the software (see section “Initial Setup of Spycer” on page 3-9).

When Spycer is started, a log file is written to a directory that logs the actions performed with the Spycer user interface (see section “Gathering Diagnostic Information” on page 8-26 for further information).

3.2.1 Starting the Software under Linux

To get the software started under the Linux operating system perform the following:

- Select from the system menu of Linux the entry ***Audio & Video » Spycer***.
  Alternatively, you may also start the program from a command line (shell) by entering `Spycer`.

This will load the Spycer application by DVS (see section “Overview of the User Interface” on page 3-16).

3.2.2 Starting the Software under Mac OS

To get the software started under a Mac operating system perform the following:

- Select from the *`Applications`* folder of Mac OS the entry *`Spycer.app`*.

This will load the Spycer application by DVS (see section “Overview of the User Interface” on page 3-16).

3.2.3 Starting the Software under Windows

To get the software started under the Windows operating system perform the following:

- Select from the **START** button menu of Windows on the submenu ***DVS*** the entry for Spycer (for example, ***All Programs » DVS » DVS Spycer***).
  Alternatively, you may also start the program via the Spycer icon on the desktop of Windows.

This will load the Spycer application by DVS (see section "Overview of the User Interface" on page 3-16).

In case the option **Mount network drives** was selected the last time the program was exited, you will be asked by a message window to type in your password to legitimize your access to mounted network drives (see section "The Group 'Network Drives' (Windows Only)" on page 8-10).

3.3 Initial Setup of Spycer

When Spycer is started for the first time (see section “Starting the Software” on page 3-7), it will automatically initiate a setup procedure and guide you through some configuration settings. These have to be specified in order to run Spycer.

In detail the setup procedure consists of the following configuration steps:

1. General settings
2. Watch folder settings
3. Sequence file types settings
4. Remote access permissions
5. Finishing the setup

Once the respective settings for the displayed configuration step are concluded, you can proceed to the following configuration step with the **NEXT** button until the setup is finished and the software is started. The button **BACK** takes you to the previous configuration step while the button **CANCEL** aborts the setup procedure without starting the program. The required settings possibilities will be explained in this section.

The settings of the initial setup procedure are identical to some of the general configuration settings of Spycer. For further descriptions about individual settings items not explained in the following please refer to section “Configuring Spycer” on page 8-4.

For further information about the SpycerNet and the background process SpycerAgent see section “Software Structure” on page 2-4.

3.3.1 General Settings

The first configuration settings to make are some general settings. With them you determine the network connection of Spycer and whether a local content management should be enabled or disabled:

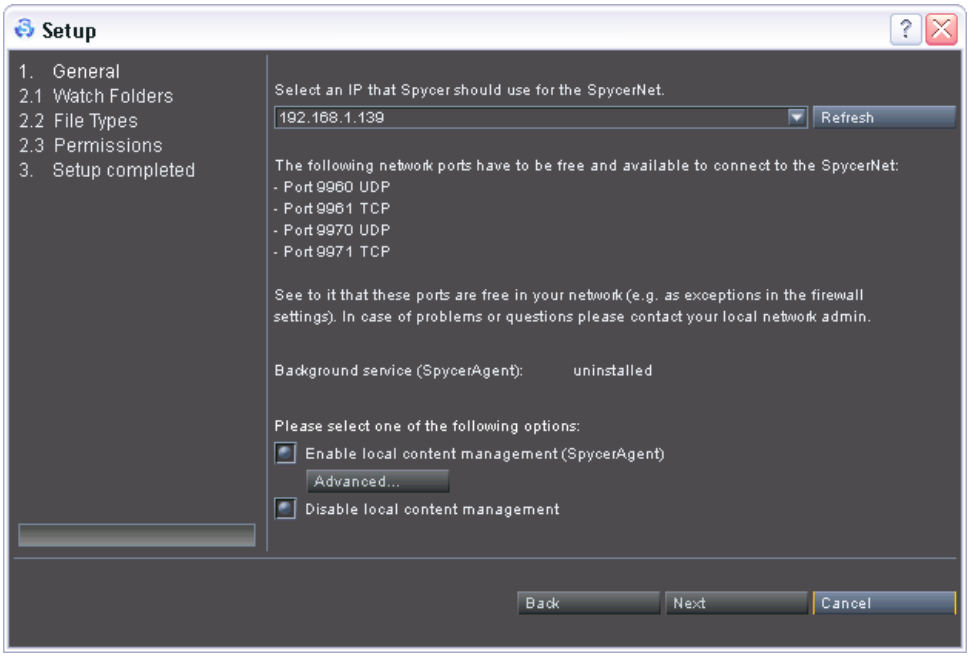

Setup
1. General
2.1 Watch Folders
2.2 File Types
2.3 Permissions
3. Setup completed
Select an IP that Spycer should use for the SpycerNet.
192.168.1.139
Refresh
The following network ports have to be free and available to connect to the SpycerNet:
- Port 9960 UDP
- Port 9961 TCP
- Port 9970 UDP
- Port 9971 TCP
See to it that these ports are free in your network (e.g. as exceptions in the firewall settings). In case of problems or questions please contact your local network admin.
Background service (SpycerAgent): uninstalled
Please select one of the following options:
Enable local content management (SpycerAgent)
Advanced...
Disable local content management
Back
Next
Cancel

Figure 3-1: General settings

From the available combo box choose the IP address that Spycer should use to communicate with other Spycer applications in a network, thereby forming the SpycerNet.

The IP addresses that can be selected with the combo box are detected by Spycer automatically. They are read from the currently active network connections of your system. If there is more than one network connection available, you can select between them via their IP addresses. In case a network connection is inactive (e.g. no cable connected), its IP address will not appear in the drop-down list. Then establish a network connection at the respective connector and click the **REFRESH** button. This will make its IP address available in Spycer.

Under Windows you can gather the IP address of a network port via the network connection icon in the system tray of the Windows task bar.

Additionally available is the localhost address (127.0.0.1) to disable the network connection for Spycer and run it locally only.

The following network ports have to be open to connect successfully to the SpycerNet: Port 9960 UDP, Port 9961 TCP, Port 9970 UDP, Port 9971 TCP. Set these as exceptions in your firewall settings otherwise Spycer will be confined to its localhost only (IP address 127.0.0.1 has to be used).

The two radio buttons at the bottom of the settings area determine whether a local content management should be performed. Without a local content management enabled Spycer will not display any local drives or storages nor observe any locally stored content. Then the user

interface can be used as a network browser only, i.e. it will display data provided by other Spycer applications via the SpycerNet only. If the local content management is enabled, the process SpycerAgent will be running in the background of your system showing you the local drives and storages as well as administering the database making the locally stored material available to Spycer and the SpycerNet.

You have to select one of the radio buttons. As long as no selection is made, the button **NEXT** will be unavailable.

If the IP address is set to 'localhost' and the local content management is disabled, Spycer will display no data at all.

3.3.2 Watch Folder Settings

If a local content management has been enabled, you have to set the watch folders next. This step will be skipped in case the local content management has been disabled (SpycerAgent disabled, see section "General Settings" on page 3-9).

With the watch folders you determine the locations on your local storage that should be searched for video and audio material by the SpycerAgent and afterwards be monitored for file movements. All data found in these volumes/directories will be written into a database administered by the SpycerAgent. The contents of the database is then displayed in Spycer and available for search procedures. Additionally, it is the database that will be visible to other Spycers in the SpycerNet if browse and search permissions are given (see section "Remote Access Permissions" on page 3-14).

Viewing or reading the contents of other drives or directories on your system (local reading including that of mounted network drives) is still possible with Spycer. With a local content management enabled, the application displays all data locally available when selected in its browser. However, because the contents of these locations are not scanned and indexed in the database, they are read when accessed only and neither will a search with Spycer include these locations nor will they be visible in the SpycerNet.

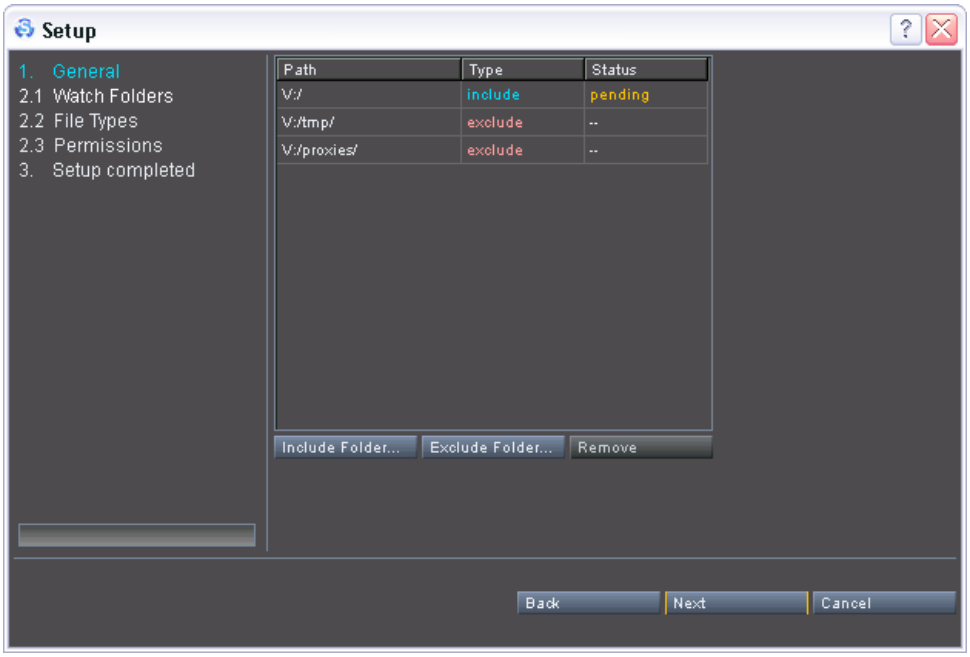


Figure 3-2: Watch folders settings

To determine that a folder (either a drive or directory) should be watched by the background process, add it to the list box with the button **INCLUDE FOLDER...**. Normally this will be the local drive or directory where the video data is stored. Of course, you can add more than just one folder to this list in case your data is distributed over several drives/directories. For example, the CLIPSTER and the Pronto2K.2 / ProntoHD.2 video systems by DVS usually use the local drive `V:/` to store video and audio data. So the drive `V:/` should be added to the list box above via the **INCLUDE FOLDER...** button.

Network drives and important system drives/directories cannot be selected as watch folders.

The SpycerAgent registers all data (even unknown files) as well as all events that take place in the watch folders. To minimize the size of its database and the overall traffic for the SpycerAgent it is recommended to include directories/drives that contain video/audio files only.

With the button **EXCLUDE FOLDER...** you can specify drives and directories that should not appear in the SpycerNet or the Spycer user interface. Usually with this you exclude them from being scanned into the database (as a subdirectory of an included folder). For example, the CLIPSTER and the Pronto2K.2 / ProntoHD.2 video systems also store video related system data on the video drive to make this information available in real time (e.g. proxies or prerendered images). Normally they would be displayed in Spycer as well. To exclude them from an appearance during browsing or searching add their location to the list box above via the button **EXCLUDE FOLDER...**. Nevertheless, other drives/

directories can be excluded as well whereupon they will not be displayed in Spycer at all.

3.3.3 Sequence File Types Settings

With a local content management enabled, you have to determine the sequence file types as well. This step will be skipped in case the local content management has been disabled (see section “General Settings” on page 3-9).

Video material is often stored not in a single file, but in numerous individual image files gathered in one directory, where one file on the hard disk equals one frame of video. These image sequences can be displayed by Spycer as a single entry. With the sequence file types settings you determine the file formats that Spycer should display as sequences, i.e. as single video clip entries. For this the file names on the storage must contain a numbering (frame numbering) of the same length.

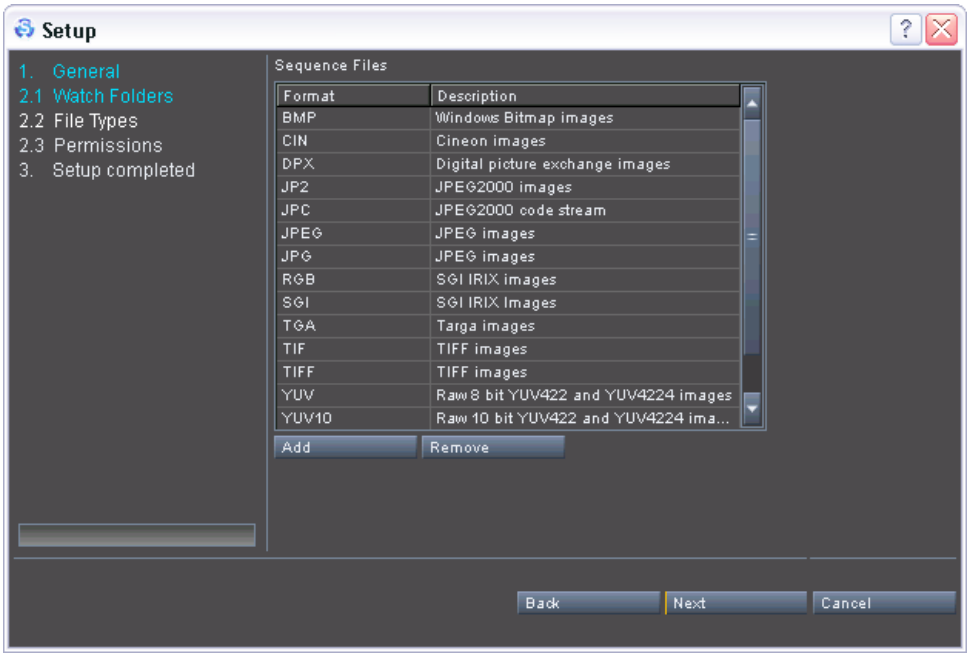


Figure 3-3: Sequence file types settings

The most common file formats that can be used for video clips are already predefined.

Add additional file formats to the list that Spycer should recognize as video clips with the help of the button **ADD**, or revise the list by either altering entries (double-click with the mouse) or selecting an entry and deleting it from the list with the button **REMOVE**.

3.3.4 Remote Access Permissions

If a local content management has been enabled, you have to set the remote access permissions next. This step will be skipped in case the local content management has been disabled (see section “General Settings” on page 3-9).

With the remote access permissions you determine what other Spycer applications in the network (SpycerNet) are allowed to do on your system.

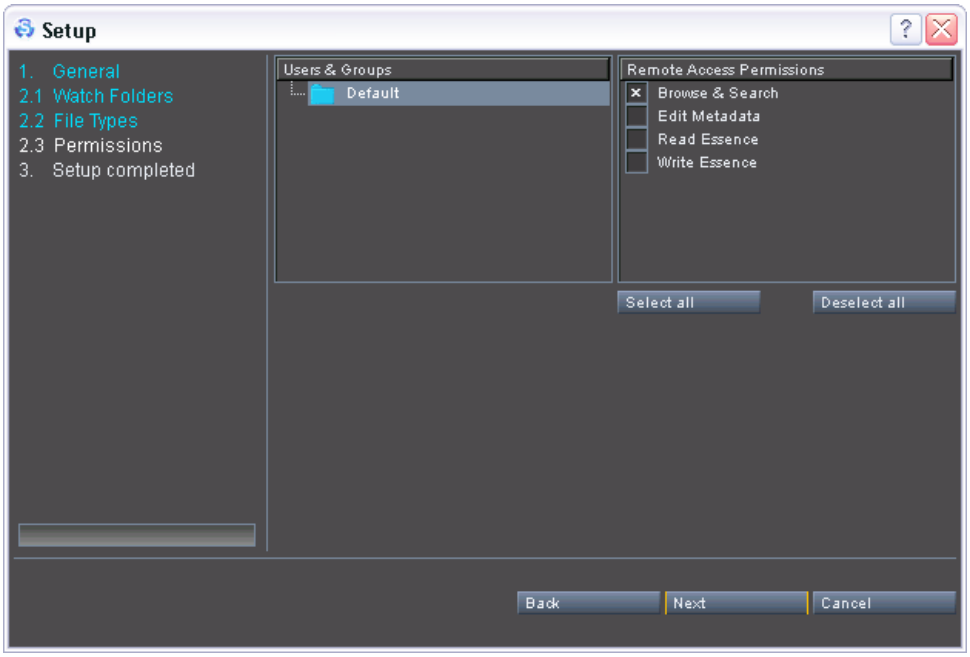


Figure 3-4: Permissions settings

In the right pane titled **Remote Access Permissions** select the permissions according to the following:

Other Spycer applications have access to the material in your watched folders only (see section “Watch Folder Settings” on page 3-11 and section “SpycerAgent” on page 2-5).

To allow other Spycer applications to defragment data on your system both read and write permissions have to be given.

Browse & Search Other Spycer applications can browse your data and perform searches. If a proxy clip of a video clip is available on your system, other Spycer applications can download it for a preview.

Edit Metadata If this check box is enabled, other Spycer applications can edit the metadata of your material on your system, including the header data of `*.dpx` image sequences.

Read Essence This setting allows the reading of data on your system, for example, for copying processes. To allow for a remote defragmentation or proxy clip generation this check box has to be activated as well.

Write Essence This setting allows the writing of data on your system, for example, for copying processes. To allow for a remote defragmentation or proxy clip generation this check box has to be activated as well.

3.3.5 Finishing the Setup

When the last configuration is made, the following screen will be displayed:

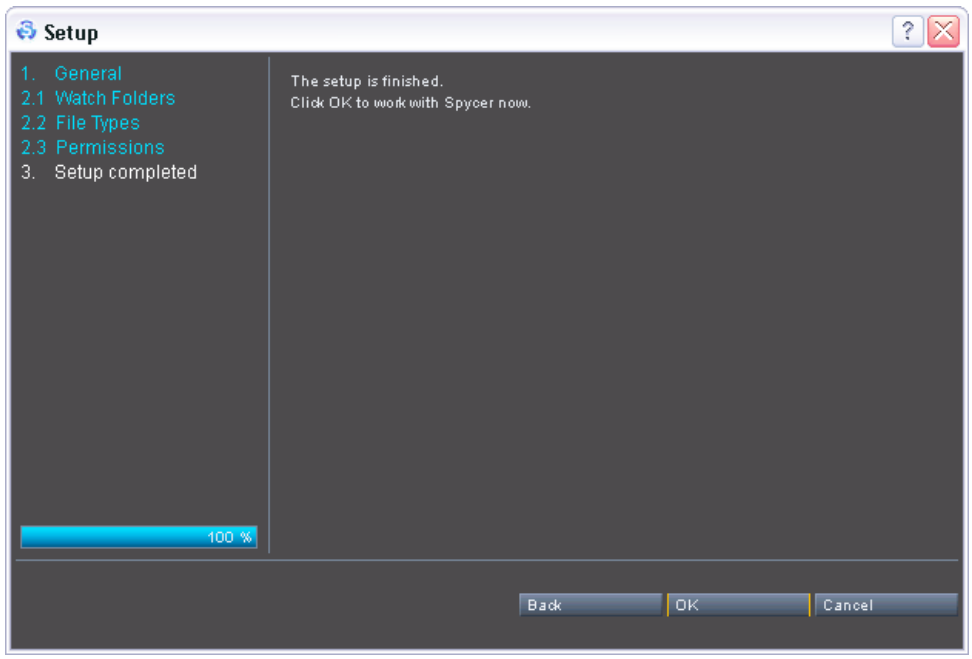


Figure 3-5: Setup completed

Then you can finish the setup procedure by pressing the button **OK** which will start the Spycer application (see section “Overview of the User Interface” on page 3-16).

If Spycer is started for the first time with no database available, the initial scanning of the watched folders may take some time depending on the amount of data stored in these locations. As long as the scanning process is active, your system will have the status 'busy' (see section “The Status Bar” on page 4-9).

3.4 Overview of the User Interface

The following figure shows the user interface of Spycer as it appears after starting the program (see section “Starting the Software” on page 3-7):

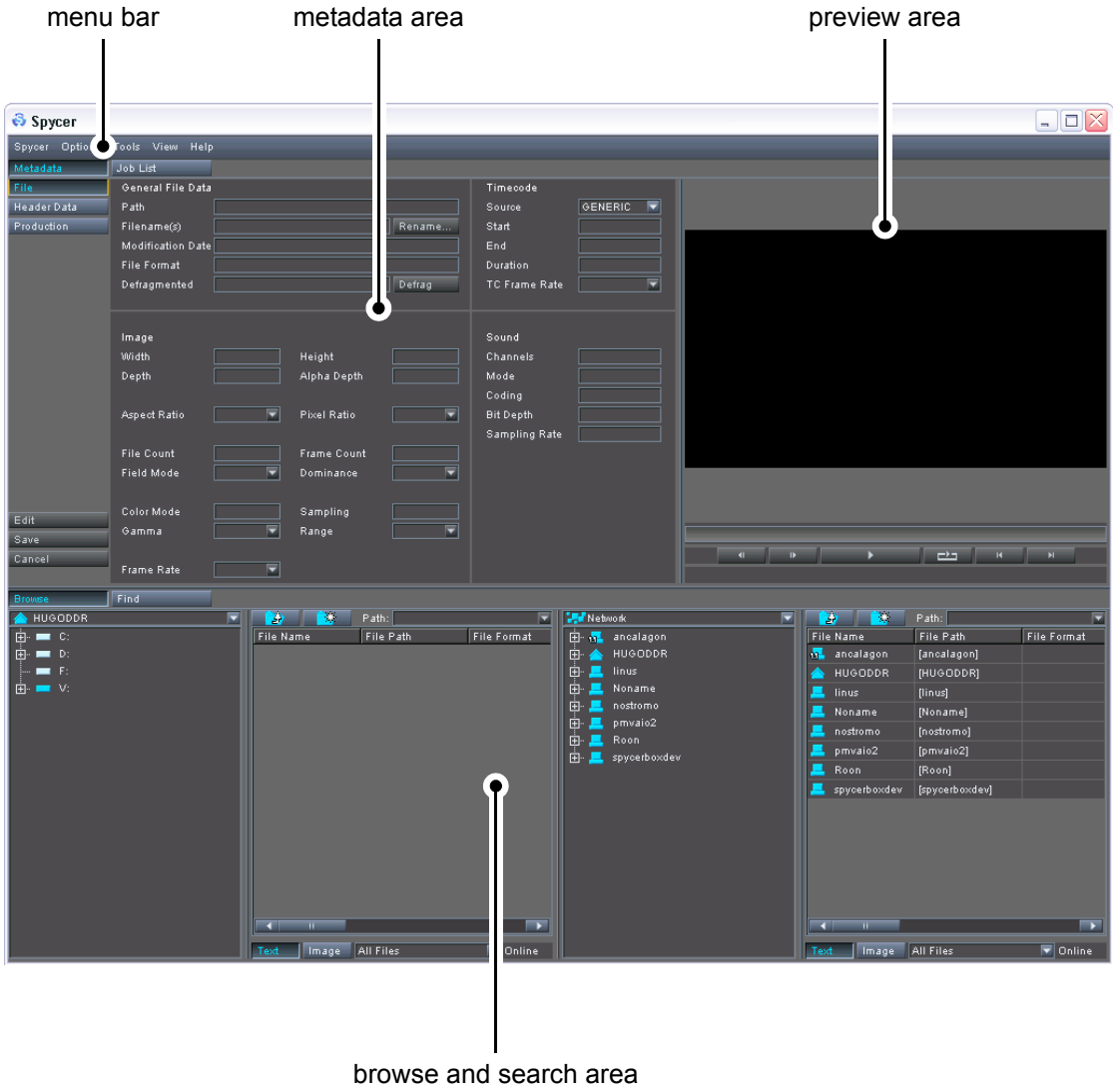


Figure 3-6: User interface of Spycer

The user interface provides the following items:

menu bar — At the top of the Spycer user interface you can find a menu bar. It provides access to functions and tasks of an administrative nature to Spycer. Here you can find, for example, its configuration settings as well as several tools. A short reference to the menu bar can be found in section “Menu Bar Reference” on page 8-16.

On Mac systems the menu bar is not available as it is under other operating systems. Instead its options can be found in the standard program menu bar of the operating system (see section “The Menu Bar on Mac OS” on page 8-16).

metadata area — Directly below the menu bar you can find the metadata area which will show you the properties and metadata of the file currently singled out in the browse and search area. You can switch through as well as add and edit the metadata easily with the buttons provided to the left. For more details about the metadata area and its various functions see chapter “Working with Metadata” on page 6-1.

preview area — To the right of the metadata area you can find the preview area. In Spycer this area is used to view the currently singled out video and image data. At the top you can find a video overlay where you can see the content of the material. Below the video overlay a scrub bar of the material’s timeline is available as well as the preview controls. The preview area is described in chapter “Previewing Data” on page 5-1.

browse and search area — With the browse and search area you can browse local or network storages in up to two browsing panes. This area also provides the search tool of Spycer which enables you to find material easily by combining various parameters, such as file names or metadata information. This area and its functionality is explained in chapter “Browsing and Searching” on page 4-1.

The view of the metadata and preview area can be switched with the job list of Spycer. You can find further information about the job list in section “The Job List” on page 7-12.

3.5 The Integrated Spycer

On CLIPSTER and the Pronto2K.2 / ProntoHD.2 Spycer is already integrated in the DVS software which makes it unnecessary to install Spycer as a stand-alone application. With the integrated Spycer you can seamlessly work together with the other software modules of the DVS software.

3.5.1 Starting the Integrated Spycer

To start Spycer integrated in the DVS software you have to start the DVS software. Then it can be loaded the same way as most other modules of the DVS software:

- Start the DVS software of the DVS video device. For details about how to do this please refer to the documentation of the video system software.
- Next press the button **SPYCER** in the task bar of the DVS software (see figure 3-7 on page 3-19).

When the software module of Spycer is started for the first time, the initial setup of the application will be launched. Then you have to detail the necessary configurations as described in section “Initial Setup of Spycer” on page 3-9.

In case the option **Mount network drives** was selected the last time the program was exited, you will be asked by a message window to type in your password to legitimize your access to mounted network drives (see section “The Group 'Network Drives' (Windows Only)” on page 8-10).

This will load Spycer as a software module of the DVS software:

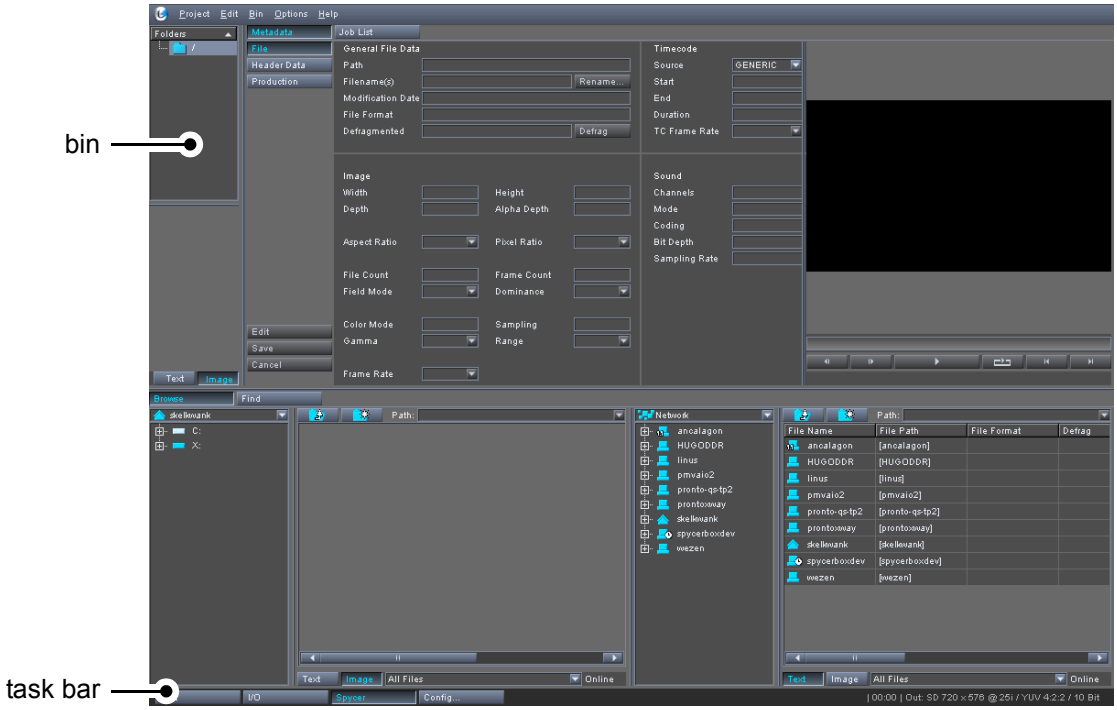


Figure 3-7: The integrated Spycer

For an overview of the Spycer software module please see section “Overview of the User Interface” on page 3-16.

3.5.2 Using the Integrated Spycer

The integrated Spycer can be used the same way as described in this user guide. In addition it provides the following functionality:

With the integrated Spycer you will notice right below the menu bar of the DVS software the bin as it is available in the Edit or I/O Tool. Once audio and video clips are displayed in the browse and search area that are locally available or stored on a SAN, they can be dragged and dropped to the contents area of the bin:

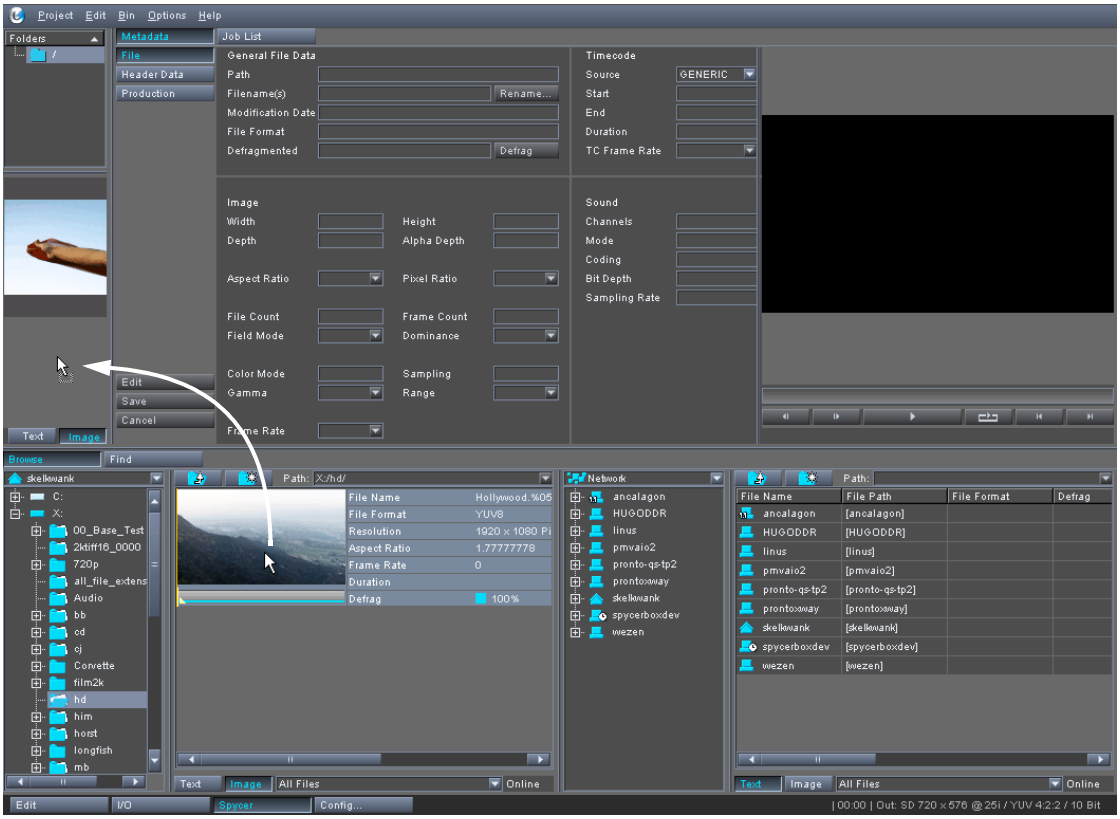


Figure 3-8: Drag and drop of clip to bin

This will add the selected clip to the contents area of the bin.

Below the user interface of the Spycer software module the task bar of the DVS software will be available as usual. With it you can switch to other software modules such as the Edit or the I/O Tool. After a switching to the Edit or I/O Tool of the DVS software the clip(s) added to the bin will still be available and can be used as usual.

Further information about the bin and the task bar can be found in the documentation of the Edit Tool of the respective DVS video system.

3.5.3 Configuring the Integrated Spycer

The general configuration settings available for the stand-alone application of Spycer (see section “Configuring Spycer” on page 8-4) can be set for the integrated Spycer as well. For this you have to start the Configuration Tool of the DVS software.

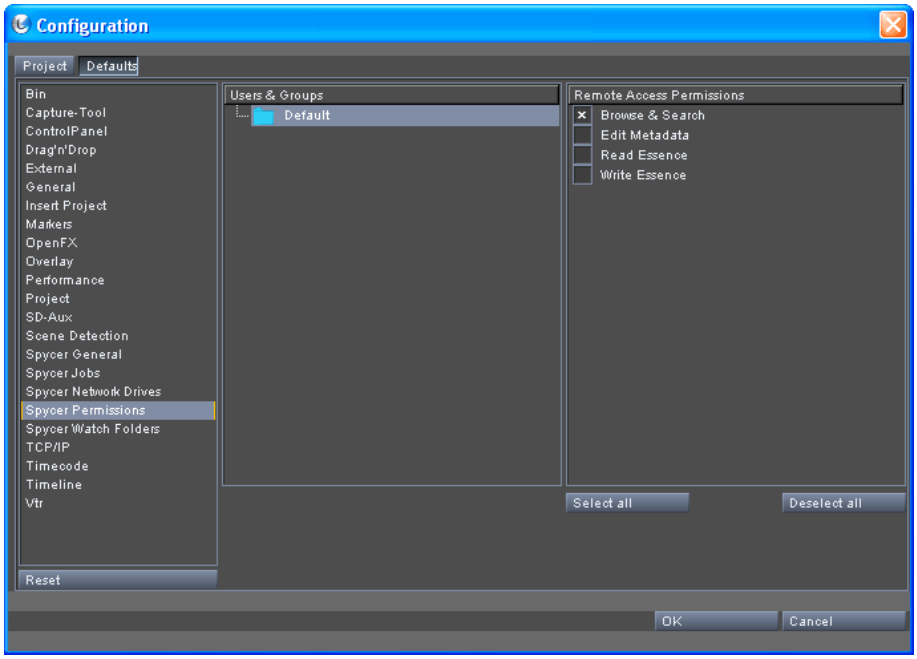


Figure 3-9: The Configuration Tool with Spycer settings

Under the default settings for the DVS software (tab **Default**) you can find in the group list several entries regarding Spycer. They provide the same settings as described in section “Configuring Spycer” on page 8-4.

Further information about the Configuration Tool of the DVS software can be found in the documentation of your DVS video system.

3.5.4 Exiting the Integrated Spycer

The Spycer application integrated in the CLIPSTER and the Pronto2K.2 / ProntoHD.2 software will be ended when the whole DVS software is exited. Further information about how to do this can be found in the documentation of the video system software.

Exiting the DVS software and thus the integrated Spycer will not terminate the background process when a local content management is enabled. The process is started during the loading of the operating system (fully operational even with no user logged in) and terminated only when the system is shut down (see section “SpycerAgent” on page 2-5 for more details).

3.6 Changing the Layout of the User Interface

The layout of the user interface of Spycer can be changed to your personal requirements. You can maximize the view of the user interface or of the preview area as well as change the size of areas. All alterations will be saved when the software is closed.

This section describes how to change the size of areas of Spycer.

Information about how to maximize certain areas or the user interface itself can be found in section “The Video Overlay” on page 5-5 and section “The 'Spycer'/Spycer Icon Menu” on page 8-17.

Generally, the software user interface shows a separation line vertically or horizontally wherever the layout of areas can be changed.

Figure 3-10: Separation line between areas

This line can be taken with the mouse and moved to another position. For example, to alter the size of the two browsing areas perform the following:

- Move the separation line between the two browsing areas to the left or to the right:

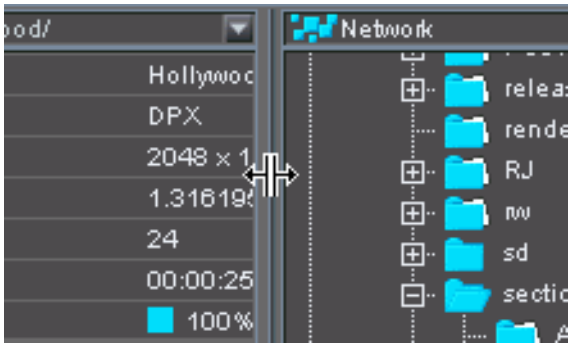


Figure 3-11: Example how to adjust the layout of the software

The horizontal size of the two browsing areas will adjust accordingly.

Furthermore, if you pull a separation line completely to the left/right or up/down, the respective area will no longer be visible and thus can be turned off (hidden). This way you can, for instance, make information visible that you may otherwise have to scroll to.

The layout of the user interface can be set back to a default layout by using the menu option ***Reset Layout*** on the menu ***View*** (see section “The 'View' Menu” on page 8-19).

3.7 Exiting the Software

To end the current Spycer session perform the following:

The Spycer application integrated in the CLIPSTER and the Pronto2K.2 / ProntoHD.2 software will be ended when the whole DVS software is exited. Further information about how to do this can be found in the documentation of the video system software, while for more information about the integrated Spycer consult section "The Integrated Spycer" on page 3-18.

Exiting Spycer will not terminate the background process when a local content management is enabled. The process is started during the loading of the operating system (fully operational even with no user logged in) and terminated only when the system is shut down (see section "SpycerAgent" on page 2-5 for more details).

- Select the option ***Quit*** on the ***Spycer*** menu (*Mac:* ***Spycer » Quit Spycer***) or press the key combination [Alt + F4] (*Mac:* [⌘ + Q]) alternatively.

  Linux/Windows only: In fullscreen mode the menu ***Spycer*** will be replaced by the Spycer icon. However, it provides the same menu options as the menu ***Spycer*** (see section "The 'Spycer'/Spycer Icon Menu" on page 8-17).

The user interface of Spycer will be closed and you can then, for instance, shut down the computer system.

When exiting Spycer, the log file opened during the starting of the application is finished and saved (see section "Starting the Software" on page 3-7).

Browsing and Searching

In the lower part of the Spycer user interface you can find the browse and search area. With it you can browse local or network storages in up to two browsing panes.

This area also provides Spycer's search tool enabling you to find any searched for material easily by combining various search parameters, such as file names or metadata information.

This chapter first explains the browse tool, followed by a description how to initiate and perform a search with Spycer.

4.1 Browsing for Data

With the button **BROWSE** at the top left side of the browse and search area you can activate the browse tool of Spycer if not already visible in the user interface.

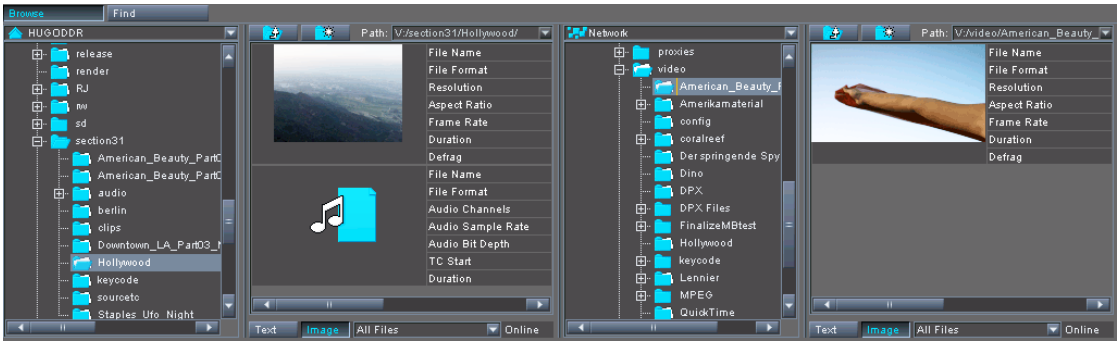


Figure 4-1: The browse tool

It offers two browsing panes for overview purposes and drag-and-drop procedures. The following figure gives an overview of one of the browsing panes:

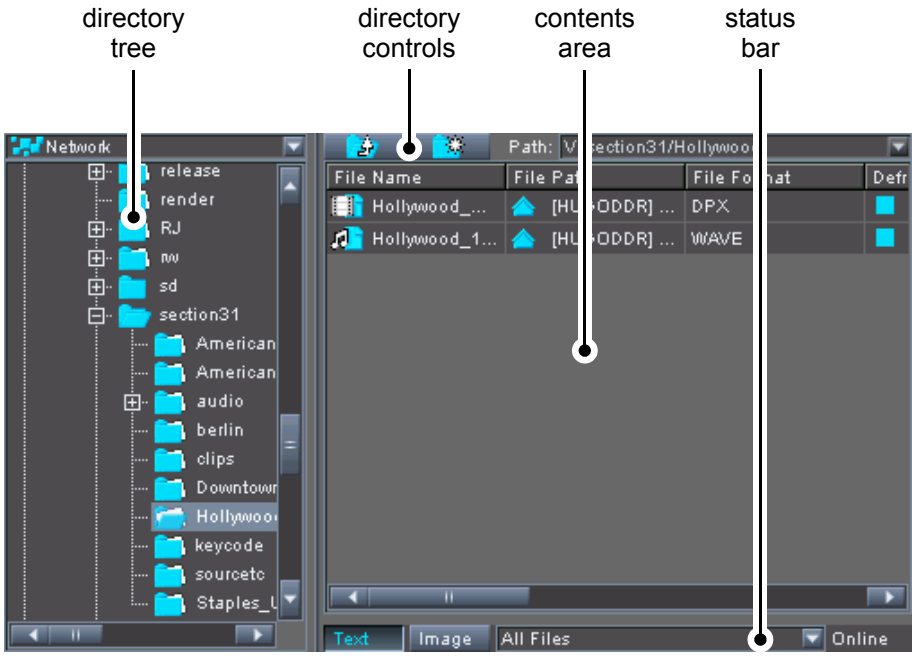


Figure 4-2: Overview of a browsing pane

This section explains the browse tool in detail. First the individual items of a browsing pane as indicated in the figure above will be described, complemented by an explanation of the context menu available in the browse and search area. The section will be concluded with some sample step-by-step descriptions how to use the browse tool of Spycer.

4.1.1 The Directory Tree

The directory tree enables you to see the contents of your system/network in a folder structure.

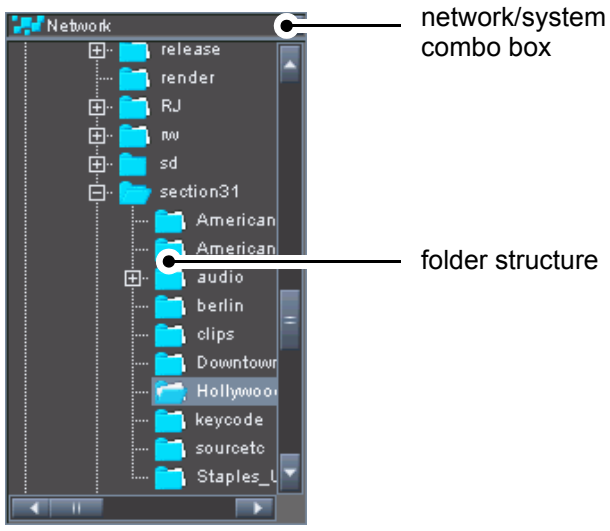


Figure 4-3: Overview of the directory tree

With the network/system combo box at the top of the directory tree you can select whether you want to view the contents of a particular system or the whole network:

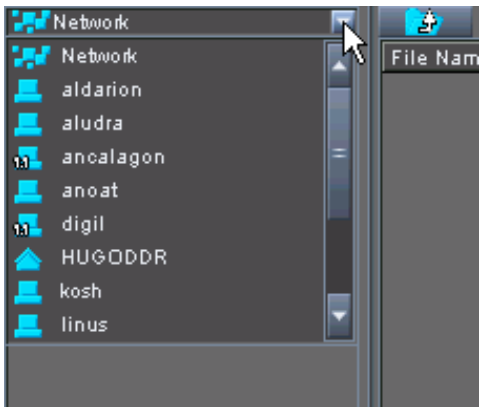


Figure 4-4: Network/system combo box

Once a selection is made in the combo box, you can browse the network or system in the folder structure. Either by double-clicking an entry with the mouse or by clicking on the plus (+) or minus (-) sign in front of an icon you can expand or collapse the contents sorted under this item.

The different icons provided by the directory tree indicate the following:

The whole network. The whole network, i.e. all systems in the SpycerNet as well as the home system, is displayed and can be used for the respective task.

A foreign system. This icon indicates a foreign system in the SpycerNet. When selected, only this particular system (i.e. its watched folders) will be visible and used for the respective task.

Same as 'a foreign system' but with an older Spycer version running. Some features that you can perform on your system cannot be triggered on the foreign system. See section "Notes about Networking with Spycer" on page 2-8 for further information.

The home system. This icon stands for the host system. When selected, all its local storages will be visible and used for the respective task (for a search only the watched folders).

When an icon is displayed together with a clock ( ), its system is busy (see section "The Status Bar" on page 4-9).

Furthermore, there are several drive and directory icons available:

A drive of an SNFS volume (SAN).

A normal system drive (e.g. an NTFS volume).

A directory/subdirectory of a drive that does not contain data directly. However, it may contain subfolders that carry data.

A directory/subdirectory of a drive containing data that will be displayed in the contents area of the browsing pane as soon as the folder is selected.

Other drives, such as USB storages or network drives will also be indicated by different icons.

The states of the drives and folders are shown in the folder structure of the directory tree via colors:

Directory Color	Explanation
light blue	This drive/directory is locally available but neither explicitly included nor excluded in the watch folder settings. However, it may contain a subdirectory that is a watched folder. File-based processes in these drives/directories are possible (e.g. copy, move or delete procedures). The contents of these locations are not included in the database of Spycer and they are read when accessed only. Thus it may take some time to open them, especially when they contain a lot of data. With the menu option ***View*** on the context menu of the directory tree, it is also possible to hide these locations. Then only the watch folders will be visible in the directory tree (see section "The Context Menu" on page 4-9).
dark blue	This drive/directory is monitored by the background process, i.e. it is a watched folder.

For further information about watched folders see section "Watch Folder Settings" on page 3-11.

As soon as a drive/directory is selected that contains data, its contents will be displayed in the contents area of the browsing pane.

4.1.2 The Directory Controls

With the directory controls at the top of each browsing pane you can control the directory tree. It offers the following possibilities:

This button moves you one item up in the folder structure.

This button adds a new subdirectory to the currently selected drive/directory. It opens a dialog window where you have to enter the name of the new directory. After confirming the name with the button **OK** the directory will be created.

The field **Path** details the path to the currently selected directory: First the drive letter is given, followed by the directory path.

4.1.3 The Contents Area

The contents area of a browsing pane shows you the contents of the currently selected drive/directory in the directory tree. All files at the selected storage location will be displayed, either in text information or thumbnail view depending on the viewing settings for the respective browsing pane (see section “The Status Bar” on page 4-9).

A contents area providing the same features as explained here as well as in section “The Status Bar” on page 4-9 and section “The Context Menu” on page 4-9 is also available in the search tool after performing a search (see section “The Results Area” on page 4-19).

With the menu option ***View*** on the context menu of the contents area, you can also display directories that are available at the selected location (see section “The Context Menu” on page 4-9).

In the text information view you will receive a detailed list of the folder’s contents. In this view you can easily sort the files/clips in ascending or descending order by clicking on the column heading that the data should be sorted by.

Figure 4-5: Contents area in text view

When in the thumbnail view, still images and video clips are shown in the contents area of a browsing pane with a thumbnail preview. In this view you will get additional information about the displayed material via text that appears to the right of the thumbnail.

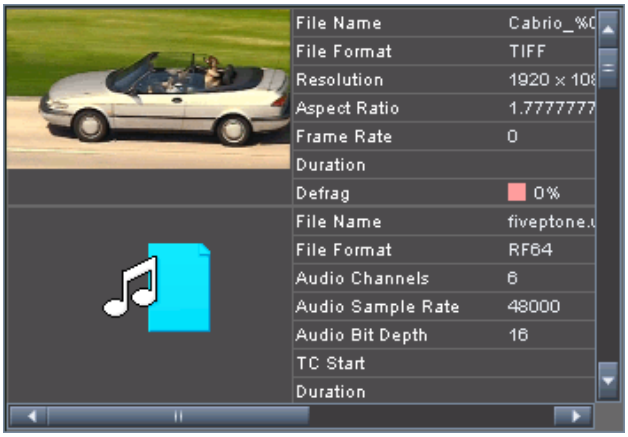
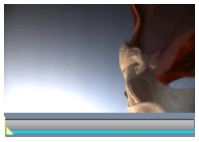


Figure 4-6: Contents area in thumbnail view

The following table shows the material and data types that can be viewed in the contents area of a browsing area and explains the way they are displayed:

video clips:



In the thumbnail view video clips are shown in the contents area of a browsing pane with a thumbnail preview. When a clip is selected, a scrub bar below the thumbnail will be available that can be used to preview the clip in still images (see section "Previewing Data via Thumbnails" on page 5-2).

In the text information view video clips are indicated by this icon. In case it is visible in the thumbnail view, it indicates either a video clip whose data is currently not available or an invalid clip. Then wait a few seconds and give Spycer time to gather the data. If necessary, refresh the view of the directory/contents area. If after that the icon is still visible, see to it that the right video material is provided on the respective video storage.

audio clips:

Audio clips are shown with this icon in the browsing pane (in the text information as well as thumbnail view). Audio files that contain more than one mono or stereo channel (multiple channels) are also supported by Spycer.

project files:

Project files of the CLIPSTER and the Pronto2K.2 / ProntoHD.2 software will be shown with this icon in the browsing pane (text information as well as thumbnail view).

still images:

Still images, i.e. single image files of a file format that Spycer supports, are also displayed in Spycer. In the thumbnail view still images are shown with a thumbnail preview. However, because they are not video clips they do not provide a scrub bar when selected.

In the text information view still images are indicated by this icon. In case it is visible in the thumbnail view, it indicates either a still image whose data is currently not available or an invalid image. Then wait a few seconds and give Spycer time to gather the data. If necessary, refresh the view of the directory/contents area. If after that the icon is still visible, see to it that the right data is provided on the respective storage.

unknown:

Spycer shows all files available on the storage, even files of unknown formats. Files that are not recognized by Spycer are displayed with this icon (text information as well as thumbnail view). However, because each will be worth one entry in the database of the SpycerAgent, your storage should contain as few of these files as possible. Otherwise search procedures may get lengthy due to unnecessary overhead.

directories/ drives/ systems:

Other items may be displayed in the contents area with appropriate thumbnails/icons as well, such as directories (if enabled, see menu option ***View*** in section "The Context Menu" on page 4-9), drives or systems. For further information about them see section "The Directory Tree" on page 4-3.

4.1.4 The Status Bar

The status bar at the bottom of a browsing pane offers you several configuration settings for its contents area as well as a status indication of the currently selected system. In detail it provides the following:

Further information about the text information and thumbnail view can be found in section "The Contents Area" on page 4-6.

Use the button **TEXT** to view the files/clips in the contents area with their text information only.

With the button **IMAGE** you can activate the view of the thumbnails.

This combo box enables you to a selective viewing of the material displayed in the contents area. Select from it the type of data that should be visible in the contents area only.

This field indicates the status of the system currently selected in the directory tree (indicated by the field **Path** of the directory controls, see section "The Directory Controls" on page 4-5). When it shows `Online`, it is ready for further processing tasks. When it shows `Busy` written in red, the system is occupied by a task and will react to your command as soon as it is ready again. The status `Busy` may be displayed, for example, when the system is performing a real-time operation or in case the database of its Spycer application is updated. In the browsing panes the icons of systems that are busy will be displayed together with a clock (see section "The Directory Tree" on page 4-3).

4.1.5 The Context Menu

The context menu of the browsing pane (usually invoked with a right-click of the mouse) provides different directory and file related functions, such as the deletion of a directory and/or file.

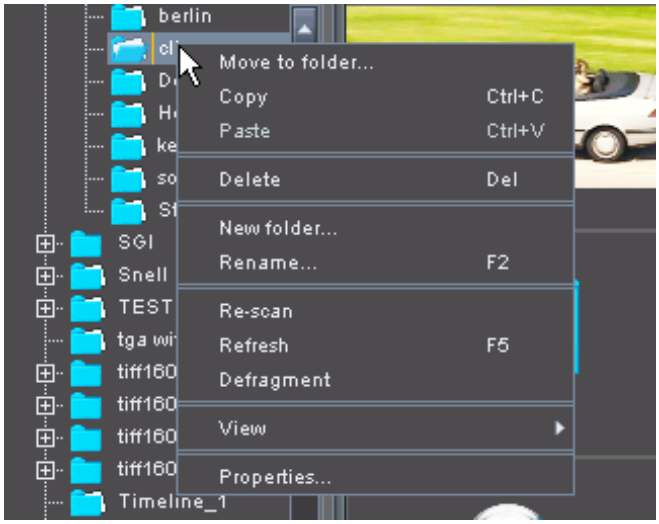


Figure 4-7: Context menu of a directory

The context menu provides the following functions:

Depending on whether the context menu is invoked in a directory tree or in a contents area it may provide different menu options. The following list details all options that are available.

Open with Available for the contents area and files on the home system only. This menu option provides a submenu where you can select between several possible applications to open the currently selected file with. You can, for example, open the file in the standard file manager of your operating system (Mac and Windows only) or in the application that is configured as the default application for this file format (menu option ***Default***).

Show all metadata Available for the contents area only. Performs the same operation as a double click on a file in the contents area: The file is singled out and is displayed in the metadata and preview area.

Show in browser Available for the results area after a search only. Shows the selected file in the browse area of Spycer thereby displaying its location.

Save as TXT... Available for the contents area only. Saves the text information of the files currently selected in the contents area to an ASCII file.

Select all Available for the contents area only. Selects all files available in the contents area.

Move to folder… Moves the selected directory/file(s) to another location. When activated it will open a dialog window where you can select a new storage location on your home system.

A direct moving of directories/files in the SpycerNet is not possible. Within the network directories/files can be copied only.

Copy Copies the selected directory/file(s) to the clipboard of the operating system.

Paste Pastes the contents of the clipboard (see ***Copy***) at the currently selected location.

Delete After the confirmation of a warning message this menu option deletes the selected directory/file from the storage.

This menu option deletes the selected directory/file physically from the storage. It is directly deleted and there is no undo functionality or recycle bin available to restore the data.

New folder… Creates a new subdirectory at the currently selected location. This menu option opens a dialog window where you have to enter the name of the new directory. After confirming the name with the button **OK** the directory will be created.

Rename… Changes the name of an already existing directory/file. It opens a dialog window where you have to enter the new name. After confirming the changes with the button **OK** the directory/file will be named accordingly.

When called for a video clip whose frames consist of still images, it will open the renaming tool for clips (see section “Renaming” on page 7-2).

Re-scan Available for the directory tree only. Sometimes the SpycerAgent may not detect an event. Then you can use this menu option to rescan the currently selected drive/directory and revise its entries in the database. Any virtually added metadata such as the production metadata will be retained.

Refresh This menu option refreshes and updates the view of the currently selected drive/directory.

Defragment Initiates a defragmentation of the currently selected file, directory or drive. Further information about this can be found in section "Defragmenter" on page 7-4.

Create proxy Available for the contents area and video clips only. Creates a proxy of the currently selected video clip. Then the proxy clip is created on the system where the clip resides. Afterwards you can use it to view the video clip in real time.

To create a proxy you must have read and write permissions on the respective system and the native Spycer application must be appropriately configured for the creation of proxies.

Further information about proxies and the previewing of proxies can be found in section "Previewing Data with the Preview Area" on page 5-4.

Convert... Available for the contents area and video/image files only. Opens the file format conversion tool of Spycer to convert the selected video clip or still image to another file format. Further information about this can be found in section "File Format Converter" on page 7-8.

View The menu option ***View*** enables you to configure which items to see in the directory tree and/or the contents area.

When invoked on the directory tree, it shows the menu option ***Hide unwatched folders***. With it you can hide all drives/directories, that are not watched by the SpycerAgent. Once the menu option is activated, it shows a cross in front and only the watched folders will be displayed in the directory tree.

When invoked in the contents area, it shows ***Show folders***. This menu option allows you to view directories in the contents area. Once activated, it shows a cross in front and directories available at the selected location will be displayed in the contents area as well.

Properties... With this menu option you can call up the properties of the file, directory or drive where the context menu was invoked. They will be shown in the properties window. Further information about this can be found in section "The Properties Window" on page 8-2.

4.1.6 Using the Browse Tool

With the browse tool you can browse local or network storages in up to two browsing panes. Additionally, you can perform all directory and file related tasks here, for example, create new or delete existing as well as copy, move or rename directories or files.

The following describes step-by-step some sample tasks illustrating how to use the browse tool, i.e. it will be explained how to copy and move directories/files as well as how to delete them.

Copying (Moving) Directories/Files

Copying directories/files with the browse tool of Spycer can be performed without effort. It offers two browsing panes where you can do this easily via drag-and-drop. When operating between storage locations at your home system, directories and files can also be moved:

- If not already visible in the user interface activate the browse tool with the button **BROWSE** at the top left side of the browse and search area.

Then the user interface displays the two browsing panes of Spycer.

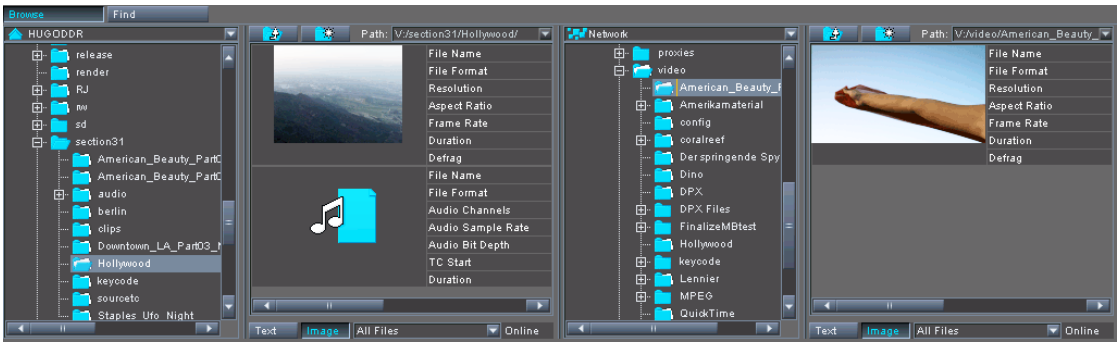


Figure 4-8: The browse tool

- In the directory tree of the left pane browse to your target directory, i.e. the directory where the data should be copied to.
- In the right browsing pane browse to the directory containing the material that should be copied, i.e. the source directory.

- After that select in the right browsing pane the material (either a drive/directory from the directory tree or files from the contents area) that should be copied or moved.

  Files in the contents area can be selected as easily as in a file manager. For example, you can select a range of adjoining files with the mouse when the [Shift] key is pressed, while disjointedly you can select them when the [Ctrl] key (*Mac:* [⌘]) is pressed. Further information about this can be found in section "Keyboard Shortcuts" on page A-8.

- Now drag and drop the selected material to the left browsing pane by using the left mouse button. It can be dropped either in its contents area as shown in the following figure or on the target directory in the directory tree.

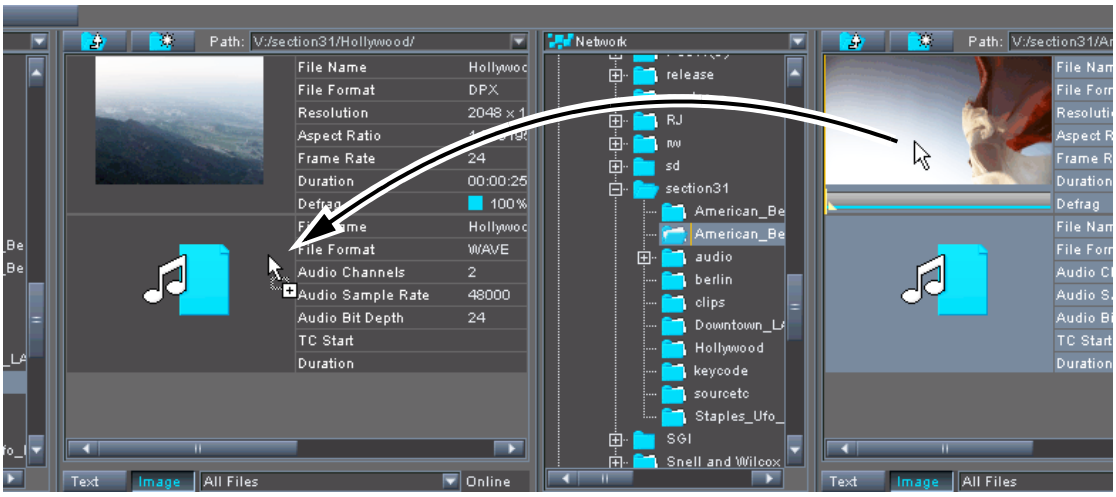


Figure 4-9: The browse tool

This will copy the material to the target location.

Between different systems in the network data can be copied only to prevent an unintentional removing of material from the native system.

Within the home system the material can also be moved. To change from a copying to a moving, press the [Alt] key during the drag-and-drop procedure.

If the drag-and-drop procedure is performed with the right mouse button instead of the left one, you will receive a context menu at the target location allowing you to select whether the data should be copied or moved.

A copying or moving can also be performed via the menu options available on the context menu of files and directories (***Copy***, ***Paste*** or ***Move to folder...***, see section "The Context Menu" on page 4-9).

Deleting Files/Directories

Files or directories can be deleted just as easily as they can be copied:

- Select a file or directory in one of the browsing panes.
- After this press the key [Del] on your keyboard.

A warning message will appear where you have to confirm that you really want to delete the file/directory.

The file/directory will be directly deleted from the storage. There is no undo functionality or recycle bin available to restore the data.

- In the warning message press the button **YES** to confirm the deletion.

This will delete the selected file or directory. If a directory is deleted, the subdirectories and all material sorted under this directory will be deleted as well.

To delete files or directories you may also use the menu option ***Delete*** on the context menu of the respective item (see section "The Context Menu" on page 4-9).

4.2 Searching for Data

With Spycer you can as easily search for data as you can browse for it. You will be able to find any searched for material by combining various search parameters, such as file names or metadata information.

With a click on the button **FIND** at the top left side of the browse and search area you can activate the search tool of Spycer if not already available in the user interface.

Alternatively you can use the keyboard combination [Ctrl + F] (*Mac:* [⌘ + F]) to switch to the search tool of Spycer.

Figure 4-10: The search tool

It provides the following areas:

search parameter area	In the search parameter area you can determine the location where the search should be conducted as well as define the search parameters. Here you can also save a search query to a file (`*.sq`) as well as load previously saved ones.
results area	The results area of the search tool will display the results once a search has been conducted. It offers almost the same features as the contents area of a browsing pane.

This section explains the search tool of Spycer in detail. First the search parameter area will be described, followed by a description of the results area. The section will be concluded with a step-by-step description how to use the search tool of Spycer.

4.2.1 The Search Parameter Area

In the search parameter area you can determine the location where the search should be conducted as well as define the search parameters. Here you can also save defined search parameters to a file as well as load previously saved ones.

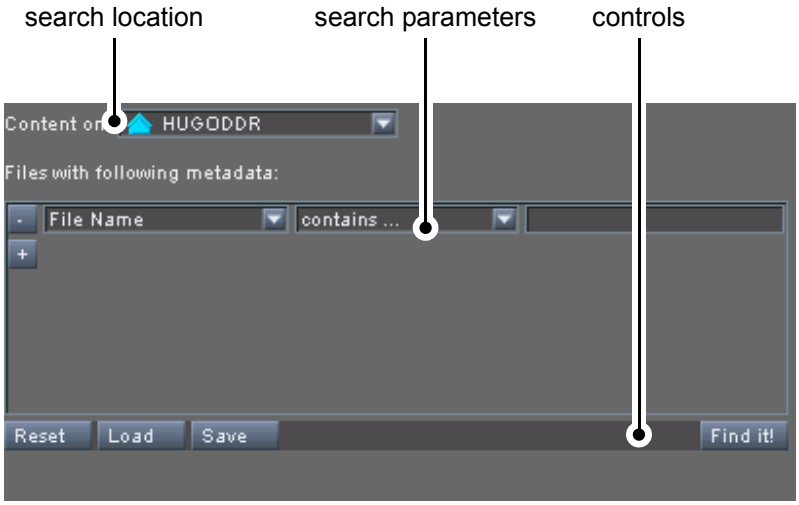


Figure 4-11: The search parameter area

All items of the search parameter area will be explained in the following:

Search Location

With the combo box **Content on** you can determine the location where the search should be conducted. Select from it whether you want to search the contents of a particular system or the whole network. It offers the same possibilities as the system/network combo box in a browsing pane (see section “The Directory Tree” on page 4-3 for more details).

Only the database of the local storage and/or the databases of the Spycer applications in the SpycerNet will be used for a search. Drives and directories not indexed in the database(s), i.e. not included in the watched folders settings, will be disregarded (see section “SpycerAgent” on page 2-5).

Search Parameters

Below the combo box for the search location the search parameters have to be detailed. With the combo box to the left determine the search criteria that should be used for the search. You can choose from a variety of different criteria ranging from file name or extension over video/audio properties to metadata information such as the production date or company.

Depending on the selected criteria the number of the available fields for a search parameter may vary. If three are available, use the one in the middle to set an operator for the search (e.g. for a file name `contains ...`, `is ...`, `begins with ...` and `ends with ...`). With the last field to the right you have to specify the criteria. It may provide an entry field where you have to type in your

search term or a combo box providing you with a list to choose the search item from.

The button **+** (+) below the search parameters adds another search parameter that the search will also observe. With it an AND search is provided (e.g. when searching for a file name that begins with `start` AND the file extension `*.wav`, you will receive all file names with the prefix 'start' and the Wave file extension such as `start_01+02.wav`). You can add as many AND searches as you like and they can be deleted just by clicking the **-** button (-) right in front of the additional parameter.

For names of video clips you have to observe the C notation usually with the syntax `<string>%0Yd.<ext>`:

`<string>`	Preceding string of file name
`%`	Marker that the following is a format string
`0`	If the output of the format string does not provide the stated length, fill it with zeros (`0`)
`Y`	Number of digits, for example, `5`
`d`	Marker that the format string is a decimal number
`<ext>`	File extension

With the search `Hollywood%05d.dpx` entered Spycer will yield as a result the clip `Hollywood` in the DPX file format that provides a five digit frame number.

Controls

With the controls at the bottom of the search parameter area you can, for example, initiate a search, clear the already defined search parameters or build up a library of often used search queries. In detail it provides the following items:

The button **RESET** clears the already defined search parameters and resets the search parameter area.

The **LOAD** button allows you to load previously saved search parameters from a file. It opens a dialog window where you have to select the respective file containing the search query (`*.sq`). After its confirmation the saved search parameters will be loaded into the search parameter area of Spycer.

Save

With the button **SAVE** you can save the currently set search parameters to a file. Thus you can build up a library of search queries to use them in the future again. A click on this button opens a dialog window where you have to specify the storage path and file name of the search query file to be saved. After the confirmation of your settings the file will be saved to the specified location (*.sq).

Find it!

With the button **FIND IT!** you start a search. It will be performed at the selected location and will yield the results according to the set search parameters in the results area to the right. As long as the search is processed, the system(s) where the search is performed will be busy, i.e. their icons will appear with a clock superimposed (see section "The Directory Tree" on page 4-3).

With the focus on the search parameter area a search can also be initiated by pressing the [Enter] key.

4.2.2 The Results Area

The results area of the search tool displays the results soon after a search was initiated.

Figure 4-12: The results area

Once a search is finished, the number of hits will be displayed at the top left of the results area. Right below it the found files can be seen.

Most of the results area resembles the contents area of a browsing pane and provides its possibilities as well. For example, you can adjust the viewing with the controls at the bottom of the results area or you can invoke the same context menu on the found files. Therefore, for more information about this please refer to section “Browsing for Data” on page 4-2.

With the menu option ***Show in browser*** on the context menu of a clip in the results area, you can immediately display the selected file in a browsing pane of Spycer. This way you can determine its location easily.

4.2.3 Using the Search Tool

The usage of the search tool of Spycer is quite straight forward. To start a search and display its results do as follows:

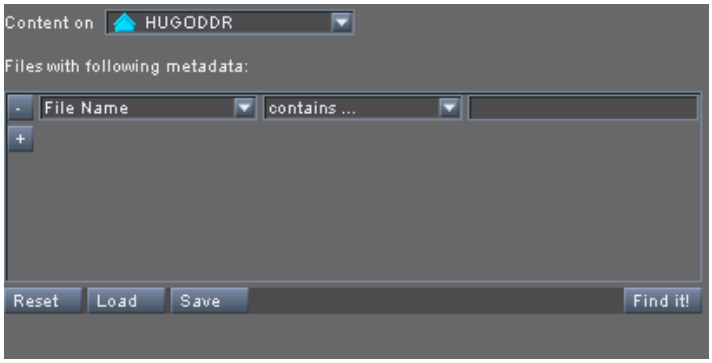


Figure 4-13: The search parameter area

- Select from the combo box **Content on** the location where the search should be made. Choose from it, for example, a particular system in the network.
- Afterwards select the search criteria that you want to search for from the first combo box of the available search parameter. In our example here we will select the criteria `File Format`.

This will slightly change the appearance of the search parameter entry fields and instead of three now only two fields are displayed.

- Select from the second combo box of the search parameter the entry, for example, for the *.tif file format.

You may use the **+** button below the specified search parameter to add another parameter that the found *.tif files also must provide to be displayed as a result (AND search).

With the criteria File Format you can only select formats that are supported by Spycer directly (see section "Supported File Formats" on page A-4). However, you can search for any file format, even ones unknown to Spycer, by entering its extension in the criteria File Name (e.g. enter .txt).

- Next start the search with the button **FIND IT!**.

The search will be conducted at the specified location(s). As long as the search is processed, the system(s) where the search is performed will be busy, i.e. their icons will be shown together with a clock. When finished, the result will be shown in the results area to the right.

To limit the displayed findings in the results area further you may also use the selective view combo box (see section "The Status Bar" on page 4-9).

By selecting entries in the results area and using the menu option ***Save as TXT...*** on their context menu you can save the search result to a text file, for example, for later evaluation.

With the menu option ***Show in browser*** on the context menu of a clip in the results area, you can immediately display the selected file in a browsing pane of Spycer. This way you can determine its location easily.

Previewing Data

This chapter provides a description where and how to preview video and image data in the software.

To the right of the user interface you can find the preview area. In Spycer this area is used to view or play the currently singled out material (video and image data). By creating and using proxy clips, video material can also be viewed in real time. At the top of the preview area you can find a video overlay where you will see the contents of the material. Below the video overlay a scrub bar of the material's timeline is available as well as the preview controls.

Additionally, you can preview image and video data via the thumbnails provided in the contents areas when browsing or searching.

5.1 Previewing Data via Thumbnails

When in the thumbnail view, video and image data can be seen with thumbnails in the contents areas of the browse and search tools. Each thumbnail is on-the-fly created and displayed as soon as a directory is selected that holds video or image data.

Further details about the contents areas of the browse and search tools not explained in the following can be found in section “Browsing for Data” on page 4-2.

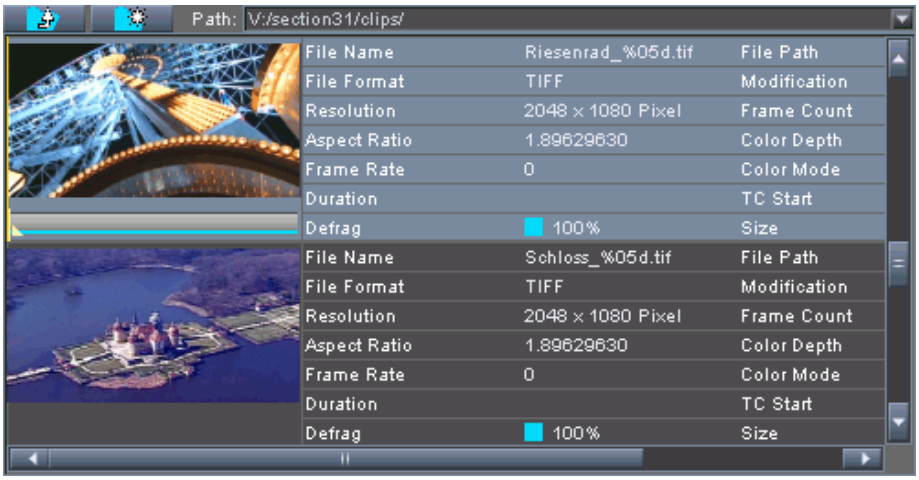


Figure 5-1: A contents area

Still images (i.e. single image files) in the browse and search area just provide their thumbnails. For video clips, however, the complete timeline can be previewed via the little scrub bar below its thumbnail. To do this perform the following:

- If not already selected, select the clip that you want to preview with a click of the mouse.

This will make the scrub bar of the thumbnail available.

- Move the cursor of the scrub bar to the left or right to view the contents of the clip:

  For this you may also use the keys [Left Arrow]/[Right Arrow] when the scrub bar has the focus (e.g. after selecting it with the mouse).

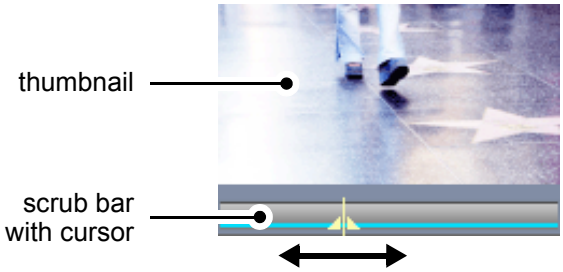


Figure 5-2: Preview of a clip in a contents area

The thumbnail above the scrub bar will show you the contents of the clip in still images. This can also be used to select a preliminary position for the metadata and preview area: When singling out the clip (see e.g. section “Previewing Data with the Preview Area” on page 5-4), the position of the scrub bar cursor will be retained and available there as well.

5.2 Previewing Data with the Preview Area

At the right-hand side of the user interface you can find the preview area. In Spycer this area is used to preview the currently singled out video and image data. Additionally, by creating and using proxy clips video material can also be played and viewed in real time.

In case the preview area is not visible it is either hidden (see section “Changing the Layout of the User Interface” on page 3-22) or the view is switched from the metadata and preview area to the view of the job list. To switch back to the metadata and preview areas use the button **METADATA** at the top left side of the user interface (see also chapter “Working with Metadata” on page 6-1).

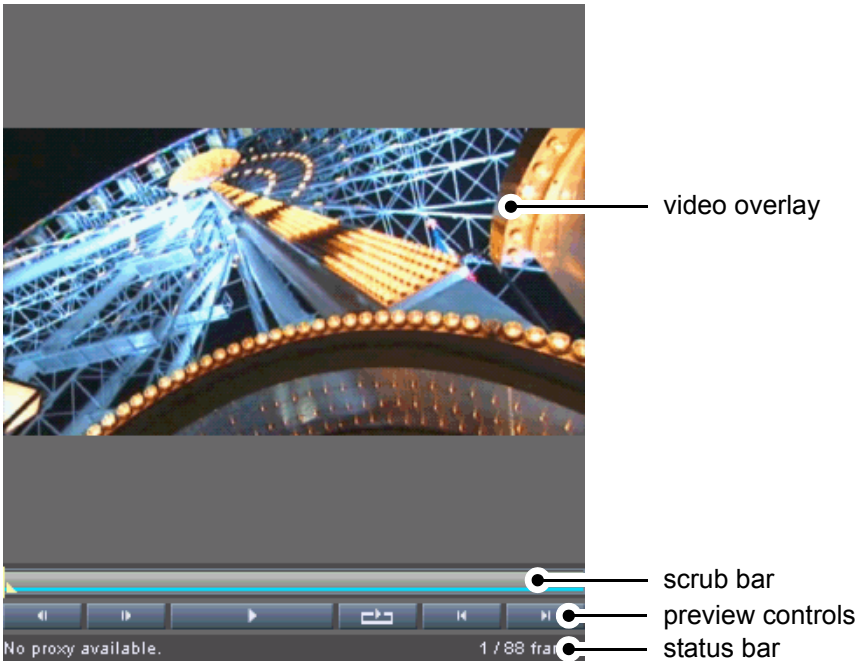


Figure 5-3: The preview area

At the top of the preview area you can find a video overlay. In case the singled out material is a video clip or still image, it will show you its content. Additionally, for video clips a scrub bar is provided below the video overlay as well as the preview controls, both allowing you to move within the clip’s content. At the very bottom a status bar is available that details further information about video and their proxy clips.

5.2.1 General Information about Proxies

Proxy clips are downscaled versions of high-resolution video material, especially created by Spycer to enable previews of video clips in real

time on systems, even when they are not equipped with real-time hardware. Usually they are generated in a container file format that allows for a compression of images as well as an embedding of audio data (if available).

The proxy generation, such as its storage location, file format or resolution, can be configured freely with the general configuration settings of Spycer (see section "The Group 'Jobs'" on page 8-8). There you can also determine that they should be created automatically as soon as clips are added to the storage. In case the automatic generation is deactivated, proxies can be easily created via the context menu of clips in the contents areas of the browse and search tools (menu option ***Create proxy***, see section "The Context Menu" on page 4-9).

To create proxies on your system the proxy generation has to be enabled and configured first (see section "The Group 'Jobs'" on page 8-8).

Just as with the database of the local storage, each Spycer application cares for and administers the proxies of the video material that is locally available only. During the creation of a proxy an entry with a progress bar will appear in the job list (see section "The Job List" on page 7-12) and the proxy clip is saved at the configured location. There, the directory structure of the watch folder where the clip is stored is reproduced to provide for an easy identification of the proxy clips.

For a real-time preview of clips locally stored, the proxies will be available immediately. The proxy's status is detailed in the status bar of the preview area (see section "The Status Bar" on page 5-7) when a clip is singled out.

In the SpycerNet proxies are shared among the Spycer applications. When a proxy clip is available on a foreign system and the clip is singled out for a preview, its proxy will be downloaded from the other system and temporarily stored on your system. It will be removed from your system again as soon as another file is singled out or the Spycer user interface is closed.

To create proxies on another system in the SpycerNet you must have read and write permissions on this system and the native Spycer application must be properly configured for the creation of proxies.

To preview an already available proxy in the SpycerNet only the browse and search permission are required.

5.2.2 The Video Overlay

The video overlay at the top of the preview area allows you to preview content of image and video data. Once a still image or video clip is sin-

gled out in the browse and search area (e.g. with a double-click of the mouse), its contents is displayed there.

With the context menu of the video overlay you can, for example, configure the appearance of the video overlay or the behavior of plays further. It provides the following menu options:

Fit to screen — Scales the video overlay to the maximum available width or height of the preview area. If enabled it shows a cross in front.

Maximize / ***Minimize*** — Either maximizes the preview area, i.e. hides all other areas of the Spycer user interface (see section "Changing the Layout of the User Interface" on page 3-22), or restores the previous layout of the user interface.

This can also be performed with a double-click of the mouse somewhere in the preview area or the menu option ***Maximize Preview Area*** on the ***View*** menu (see section "The 'View' Menu" on page 8-19).

Play original — With a proxy available this menu option forces the play of the original video material instead. If enabled it shows a cross in front.

Reload proxy — Reloads the proxy of the clip displayed in the preview area.

5.2.3 The Scrub Bar

If the singled-out file is a video clip you can find beneath the video overlay a scrub bar, representing a timeline of the clip's contents. With its cursor you can move within and view the contents of the video clip. Simply select the cursor with the mouse and move it along the scrub bar to the desired position, or click somewhere on the scrub bar to move the scrub bar cursor there instantly. While working with the scrub bar or the preview controls below, the video overlay always adjusts to your moves and displays the image of the selected position.

5.2.4 The Preview Controls

In addition to moving the scrub bar cursor manually, you can control it via the preview controls below the scrub bar, e.g. the play button. In

detail the controls beneath the scrub bar perform the following functions:

A preview can also be controlled with various keyboard shortcuts. Further information about the available shortcuts can be found in section “Keyboard Shortcuts” on page A-8.

With these buttons you can step one frame for- or backward in the contents of the video clip. The scrub bar cursor will move accordingly.

With this button you can play the video clip. If a proxy is available, it will be played in the overlay in real time. Otherwise Spycer tries to display the contents as fast as possible. After activation the button changes its appearance to its active state ( ) and you have to press it again to stop the play.

With this button activated a play of the clip’s timeline will be performed endlessly in a loop: Once the scrub bar cursor reaches the end of the clip, the play will start from the beginning again. To switch off the loop mode simply click this button again.

These buttons jump to the beginning or end of the clip displayed in the preview area. The first button jumps to the beginning of the scrub bar while the second button jumps to its end.

5.2.5 The Status Bar

At the bottom of the preview area a status bar can be found showing you information about the video clip and its proxy. It details, for example, whether a proxy clip is available for a preview, the current position of the scrub bar cursor in frames, and the clip’s total amount of frames.

Furthermore, when viewing clips over the SpycerNet, the status bar also indicates the download progress of the proxy from the foreign system as well as the data rate of the download:

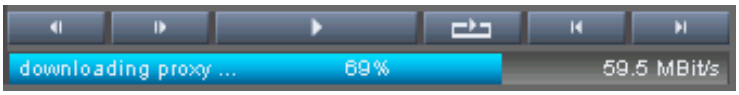


Figure 5-4: Progress bar of a proxy download via the SpycerNet

5.2.6 Using the Preview Area

To single out image and video data and view its content in the preview area you have to do the following:

- In the browse and search area (see chapter "Browsing and Searching" on page 4-1) make the desired material available in a contents area by browsing or searching for it.
- In case a specific image of a video clip should be displayed in the preview area select it with the help of the thumbnail's scrub bar (see section "Previewing Data via Thumbnails" on page 5-2).
- Next you have several possibilities at hand. Use either one of the following:
  - Select the respective file with the mouse and drag and drop it somewhere in the metadata or preview area.
  - Double-click the file with the mouse.
  - Use the menu option ***Show all metadata*** on its context menu (see section "The Context Menu" on page 4-9).

This will single out the selected data and further information about it will be displayed in the metadata area (see chapter "Working with Metadata" on page 6-1). If the singled out data is either a video clip or a still image, its content will be displayed in the video overlay of the preview area.

Furthermore, with video data displayed in the preview area you can then use the scrub bar or the preview controls to preview the clip:

- Move the cursor of the scrub bar to the left or right to move to a certain position within the clip:

  For this you may also use the keys [Left Arrow]/[Right Arrow] when the preview area has the focus (e.g. after selecting it with the mouse).

Figure 5-5: Preview of a clip in the preview area

The video overlay shows you the contents of the clip in still images.

The position of the scrub bar cursor also determines the file specific metadata that will be displayed in the header data view (see section “Header Data” on page 6-6).

If a proxy clip is already available for the singled out video clip (detailed in the status bar of the preview area), you can also preview the video clip in real time:

A proxy clip can be created with the menu option ***Create proxy*** of the context menu of the clip in the contents area of the browse and search tools (see section “The Context Menu” on page 4-9). Further information about proxy clips can be found in section “General Information about Proxies” on page 5-4.

- Press the play button ( ) of the preview controls.

Then the contents of the clip is shown in real time in the video overlay of the preview area. Without a proxy clip the preview would be displayed as fast as possible.

Working with Metadata

Metadata is data about data. In the field of digital video it stands for further information that describe the content (footage) throughout the various production stages. This may include everything from the planning and pre-production stage over the actual production and post production to the final delivery of the content. With Spycer you can add and edit metadata effortlessly.

If not already visible in the user interface, you can activate the view of the metadata and preview areas of Spycer with the button **METADATA** directly below the menu bar.

Figure 6-1: The metadata area

The metadata area will show you the properties and metadata of the file currently singled out in the browse and search area. You can switch

through as well as add and edit the metadata with the buttons (controls) provided to the left.

This chapter describes in detail the metadata area as well as how to work with metadata.

6.1 Displaying Metadata

The procedure to display metadata is the same as if you want to preview the material in the preview area to the right of the metadata area: It has to be singled out in a contents area of the browse or search tool.

For further information about the preview area please refer to section “Previewing Data with the Preview Area” on page 5-4.

To single out data and view its metadata you have to do the following:

- In the browse and search area (see chapter “Browsing and Searching” on page 4-1) make the material available in a contents area by browsing or searching for it.
- In case a specific image of a video clip should be displayed in the preview area select it with the help of the thumbnail’s scrub bar (see section “Previewing Data via Thumbnails” on page 5-2).
- Next you have several possibilities at hand. Use either one of the following:
  - Select the respective file with the mouse and drag and drop it somewhere in the metadata or preview area.
  - Double-click the respective file with the mouse.
  - Use the menu option ***Show all metadata*** on its context menu (see section “The Context Menu” on page 4-9).

This will single out the selected file and its metadata will be displayed in the metadata area. If the singled out data is either a video clip or a still image, its content will be displayed in the video overlay of the preview area.

With the metadata displayed you can now switch through as well as add or edit its metadata with the metadata controls (see section “The Metadata Controls” on page 6-3). Once an entry is changed and saved, it will be stored in the file header(s) and/or in the data record of the respective file/sequence in the database administered by the SpycerAgent.

6.2 The Metadata Controls

After metadata are displayed in the metadata area (see section "Displaying Metadata" on page 6-2) you can switch through the different metadata views as well as add or edit the metadata with the controls provided to the left. The following controls are available:

File

The button **FILE** (the first view activated when Spycer is started and the metadata area is displayed) shows the file related metadata information in the metadata fields to the right of the controls. For more details about this metadata view see section "File Metadata" on page 6-5.

This view of the metadata allows you to review most information only. Because they are properties of the singled out data they cannot be changed.

Header Data

This button switches the view of the metadata to a display of the header data provided by the singled out file. Most file formats feature a file header where further information about its contents are detailed. In the header data view of Spycer you can get a look at the data as it is written in the file itself. With video data it will display the header data of the frame (image file) that is currently selected with the scrub bar cursor of the preview area (see section "Header Data" on page 6-6). Certain entries in the header data can be edited if supported by the file format, e.g. the timecode information (source timecode). Once saved they will be directly written to the file(s).

Currently, only the header data of *.dpx files can be edited with Spycer.

Production

With the **PRODUCTION** button you switch the metadata view to its production information. Here you can add or edit additional information about the production stages of the content.

Currently this information is provided virtually by Spycer's database only. A change of the files' headers cannot be made in this metadata view.

Edit

This button allows you to add or change the metadata as they are available in the production metadata view (button **PRODUCTION**) or the header data view (button **HEADER DATA**). Once clicked the metadata can be changed.

With the **SAVE** button you can save your alterations to the metadata. The changes will be stored in the file header(s) (when in the header data view and supported by the file format) and/or in the data record of the respective file in the database administered by the SpycerAgent.

The **CANCEL** button discards all alterations to the currently active metadata view.

6.3 Metadata Views

Spycer provides three metadata views to the metadata of the singled out file: file metadata, header data and production metadata. You can switch through the different metadata views with the upper controls provided to the left (buttons **FILE**, **HEADER DATA** and **PRODUCTION**). Once the button **EDIT** is clicked and if the respective fields are not dimmed, you can change their metadata. The changes will be stored either in the file header directly and/or in the data record of the respective file with the button **SAVE**.

This section explains shortly the different metadata views provided by the Spycer user interface.

6.3.1 File Metadata

If not already displayed in Spycer activate the view of the file metadata with the button **FILE** of the controls (see section "The Metadata Controls" on page 6-3).

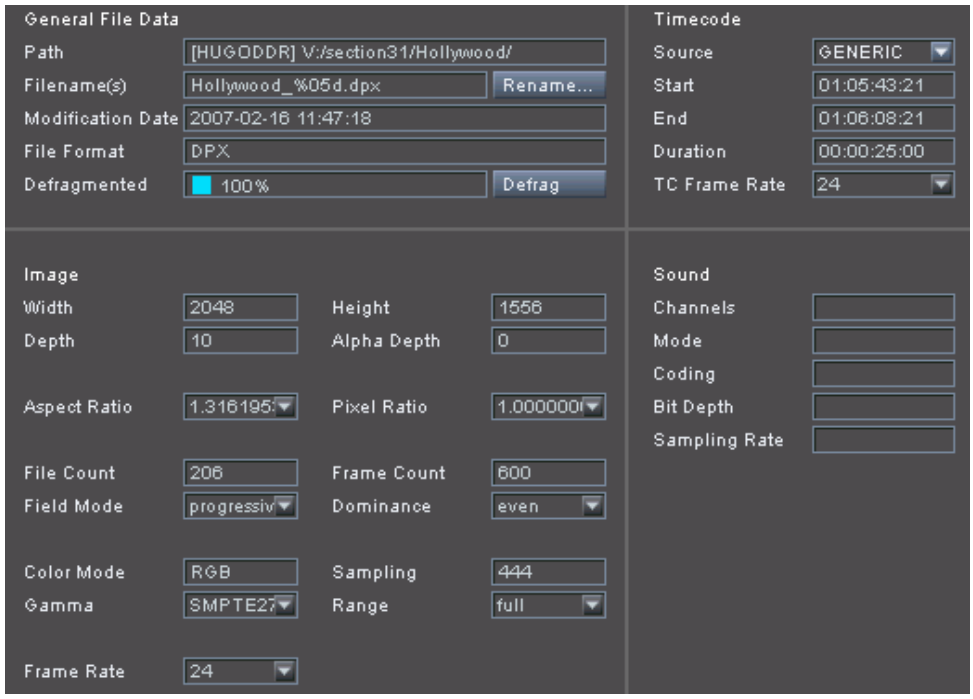


Figure 6-2: The file metadata

When a file is singled out (see section "Displaying Metadata" on page 6-2), the file metadata view shows its file related information. All files displayed in Spycer will deliver metadata in this view: For example, in the area 'General File Data' standard information about storage location and file name are detailed. Additionally, video, audio and project

files supported by Spycer (see section “Supported File Formats” on page A-4) provide the following:

This view of the metadata allows you to review most information only. Because they are properties of the singled out file they cannot be changed.

Some areas of the file metadata view will alter their appearance and show different metadata in dependence on the selected file type.

video/still images	Video and still image files present further details about their format in the area 'Image' as well as timecode or keycode information in the area 'Timecode' when timecode and/or keycode are stored in the file's headers (source timecode).
audio	Audio files detail further information about their audio properties in the area 'Sound'.
project files	Project files of CLIPSTER and the Pronto2K.2 / ProntoHD.2 will deliver information about their output settings (video format settings) as well as give a list of all media that are included in the project.

With the button **RENAME** you can change the file name(s) of the singled out material. Please refer to section “Renaming” on page 7-2 for further details.

A defragmentation of the singled out material can be initiated with the button **DEFRAG**. See section “Defragmenter” on page 7-4 for more information.

With the combo box **Source** of the area 'Timecode' you can select different types of timecode to be displayed in the file metadata view (`GENERIC`: the first and last source timecode read from the files' headers, `KEYCODE`: the first and last keycode information read from the files' headers, and `INDEX`: the start and stop index (first and last frame number) read from the file names).

6.3.2 Header Data

You can switch to a view of the header data of the singled out material with the button **HEADER DATA** (see section “The Metadata Controls” on page 6-3).

Most file formats provide a file header where further information about its contents are detailed, for example, in an image file often its height, width and color depth is detailed. Some file formats, e.g. *`*.dpx`* files,

are capable of storing even more information. These information are usually written in a specified format into the file headers and can be read and interpreted by different software applications that support these kind of information. Among them you can find, for example, the name of the creator (usually the program that created the files), the creation date and time, the timecode (so called source or generic timecode), and/or the keycode.

In the header data view of Spycer you can get a look at the data as it is written in the file itself. With video clips it displays the header data of the file that is currently selected with the scrub bar cursor of the preview area. To view the header data of another video image file simply move the scrub bar cursor of the preview area (see section "Previewing Data with the Preview Area" on page 5-4) to the desired position.

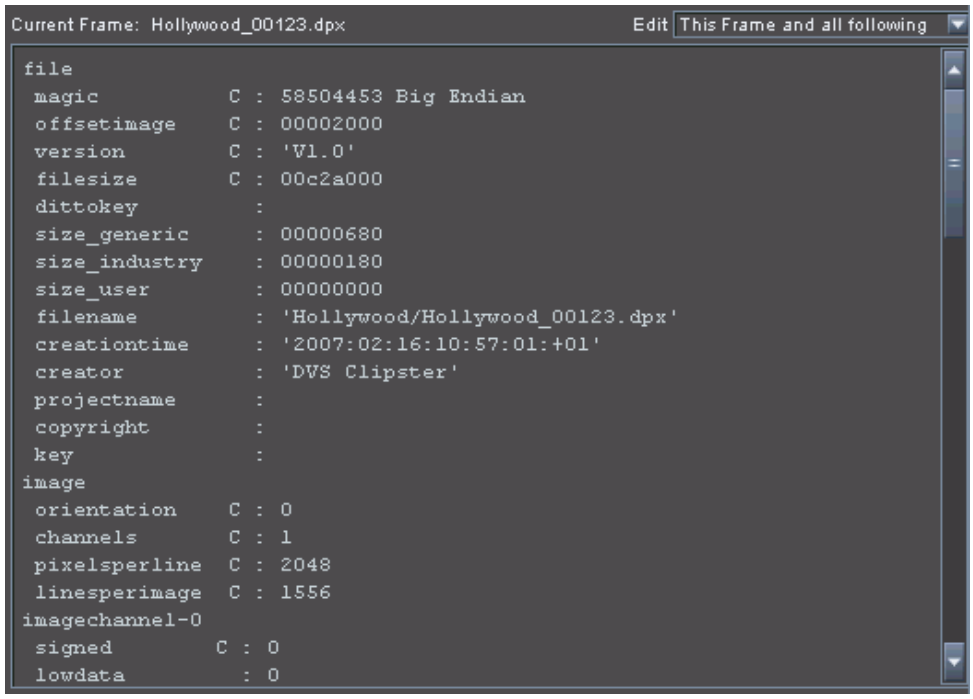


Figure 6-3: The header data

At the top of the header data view you can find further information about the material that is singled out. At the top left the file name of the material is detailed. With video clips that consist of still image files it is the one that is currently selected with the scrub bar cursor of the preview area. Certain entries of the header data can be added or edited if supported by the file format. With the combo box **Edit** at the top right you can specify where in a video image file sequence an editing of the header data should be performed.

If header data can be altered, a click on the button **EDIT** will alter the view of the header data and you receive an entry mask:

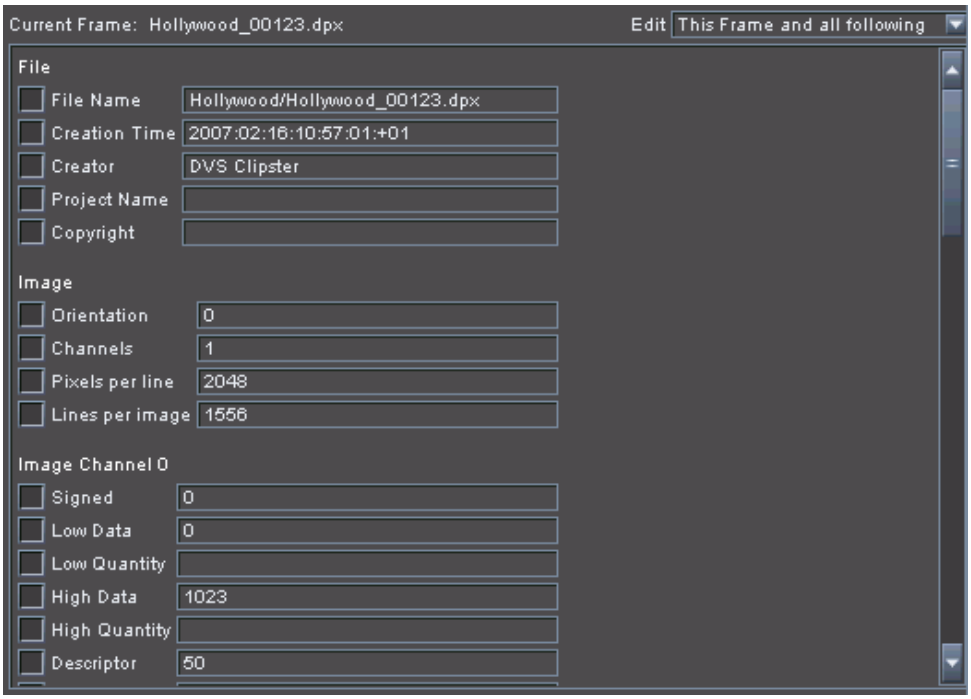


Figure 6-4: Changing the header data

The header data values that are detailed in this mask can be altered by adapting or entering a value in an entry field and activating it with its preceding check box. For further information about this see section "Altering the Header Metadata" on page 6-10.

Currently, in the header data view only the data of *.dpx files can be edited in Spycer.

6.3.3 Production Metadata

With the **PRODUCTION** button you switch the metadata view to the production metadata (see section "The Metadata Controls" on page 6-3).

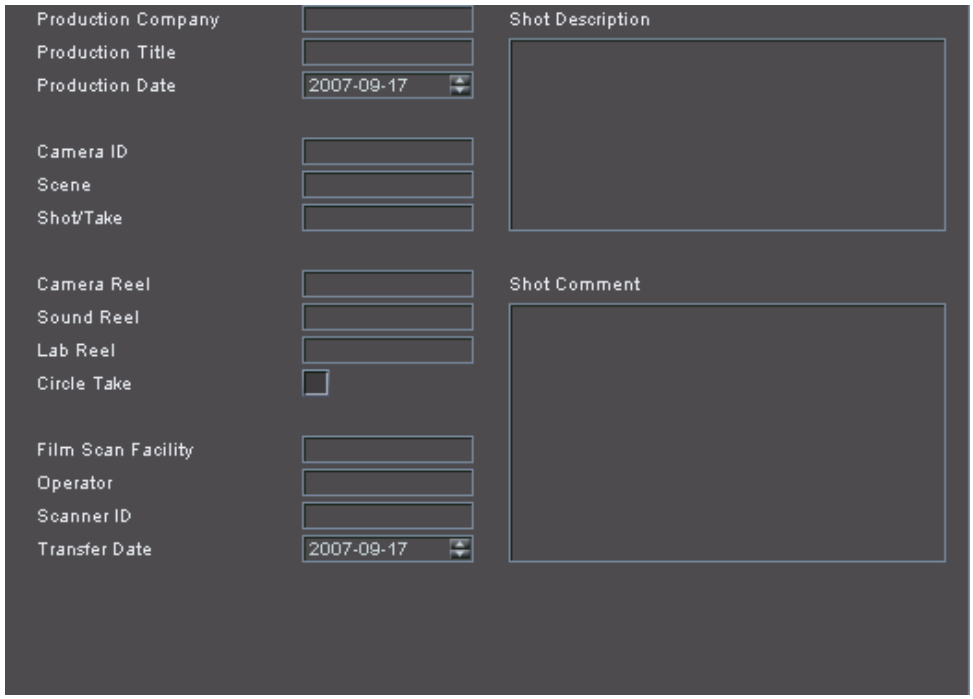


Figure 6-5: The production metadata

In this metadata view you can add or edit additional information about the production stages of the content. All fields can be changed (see section “Changing the Production Metadata” on page 6-11).

Currently the production metadata are provided virtually by Spycer’s database only. A changing of the files’ headers, even if supported by the file format, will not be triggered when changing or saving this metadata.

6.4 Working with Metadata

Once material is singled out as described in section "Displaying Metadata" on page 6-2, its metadata are displayed in the metadata area. All files displayed in Spycer provide metadata in the different metadata views. This way you can gather information from the file metadata view (button **FILE**), for instance, about the video or audio format of material or check the timecodes provided by a video clip with the combo box **Source**. Furthermore, you may compare these information with the actual header data stored in the file(s) with the help of the header data view (button **HEADER DATA**). In the production metadata view (button **PRODUCTION**) you can view its production metadata.

In the production and header data view metadata can also be added and edited. This section describes shortly how to add and/or edit metadata.

6.4.1 Altering the Header Metadata

Certain file formats of video clips also support the storing of metadata information in their files' headers. Among these metadata you can find, for example, the name of the creator, the creation date and time, the source timecode, and/or the keycode.

To change the header data of an image sequence perform the following:

Currently, in the header data view only the data of `*.dpx` files can be edited in Spycer.

- Single out the video clip whose metadata you want to change as described in section "Displaying Metadata" on page 6-2.
- In case you want to alter the metadata of a specific image or image range, move the scrub bar cursor of the preview area to the desired position (see section "Using the Preview Area" on page 5-8).
- After this switch to the header data view by activating the button **HEADER DATA**.

This displays the header data of the file currently selected with the scrub bar cursor in the header data view. Now you can change its metadata:

- Via the combo box **Edit** at the top right of the header data view select where in the file sequence an editing of the header data should be performed.
- After this activate the button **EDIT** from the metadata controls.

This will alter the appearance of the header data view and an entry mask is displayed.

In case no entry mask is displayed when the button **EDIT** is activated, an editing of the header data is not supported by the selected file format.

- Type in or alter the respective metadata information in the available fields.

To create file names with a proper frame numbering as metadata for video clips you have to observe the C notation, usually with the syntax `<string>%0Yd.<ext>` (see section “The Search Parameter Area” on page 4-16).

- Check whether the check boxes of the values that should be changed in the file header(s) are enabled.
- Afterwards save the metadata with the button **SAVE**.

This will change the values stored in the file header(s). Depending on the selected file range for the changes it may take some time. When finished, the original header data view is restored and you can see the alterations in the information displayed.

6.4.2 Changing the Production Metadata

Production metadata can also be changed. They will be stored virtually in the database of the Spycer application:

- Single out the material whose metadata you want to change as described in section “Displaying Metadata” on page 6-2.
- If not already displayed switch to the production metadata with the button **PRODUCTION** of the metadata controls (see section “The Metadata Controls” on page 6-3).
- From the metadata controls activate the button **EDIT**.

This enables you to change the metadata displayed in the metadata area.

- Type in or alter the respective metadata information in the available fields.
- Afterwards save the metadata with the button **SAVE**.

The metadata will be stored and written to the material’s data record in the database administered by the SpycerAgent. With this you can easily find the material again by searching for the added metadata with the search tool of Spycer (see section “Searching for Data” on page 4-16).

Management Tools and Job List

This chapter describes the management tools that are available in Spycer, such as the renaming of image sequences, the built-in defragmenter and the storage space calculator. Because most of the tools generate an entry in the job list of Spycer, it is explained here as well.

7.1 The Management Tools

Several management tools supplement the usage of Spycer comprising, for example, a renaming function for image sequences, an integrated high-speed copying process and a sophisticated defragmentation of image sequences. All management tools will be described in this section.

7.1.1 Renaming

Spycer provides a renaming tool for image sequences where you can easily change, for instance, the name prefixes, frame numbers or file extensions. When viewing the file related metadata of the currently singled out file, you can find right beside the **Filename(s)** entry the button **RENAME** (see chapter "Working with Metadata" on page 6-1). With it you can rename the currently singled out material.

In case the singled out material is available as a single file on the storage (e.g. an audio file), the button **RENAME** opens a dialog window where you simply have to enter the new name. Once the file name changes are confirmed with the button **OK**, the file will be named accordingly.

However, when the button **RENAME** is called for an image sequence consisting of still images, it opens the renaming tool of Spycer:

A renaming either for a single file or a file sequence can also be called with the menu option ***Rename...*** on the context menu of a directory/file in the browse and search area (see section "The Context Menu" on page 4-9).

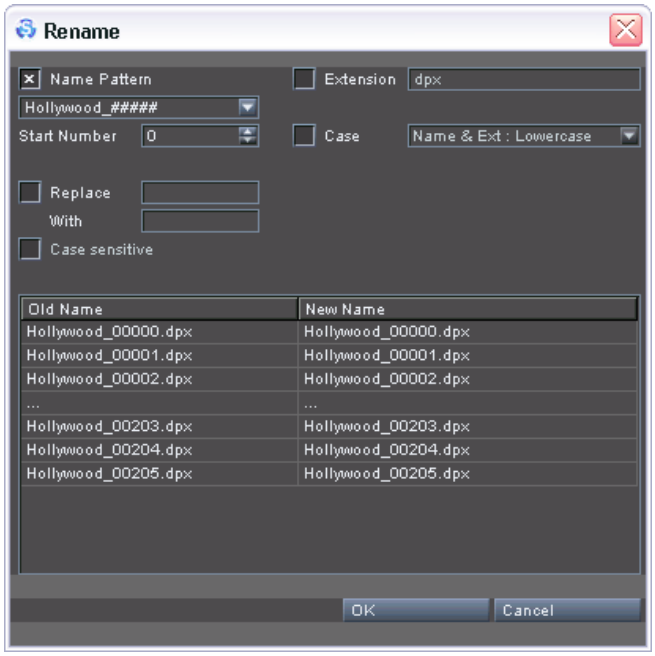


Figure 7-1: The renaming tool

The renaming tool of Spycer provides the following items:

Name Pattern

Start Number

With the check box **Name Pattern** you enable a change of the pattern of the files. Usually, this is used to alter the frame numbering.

Change the name pattern in the entry field below the check box. The hash symbols (#) indicate the pattern of the frame numbering. If the number of hash symbols exceed the number of digits of the frame numbering, they will be filled with zeros. This entry field can also be used to change the file names' prefixes (same effect as 'Replace/With').

The **Start Number** entry field changes the frame number of the first frame file (start frame). All other files will be numbered in ascending order.

Extension

If activated, it will change the file extension of the image sequence with the term entered in the entry field to the right.

Case

When enabled, it will change the upper and/or lower cases of the file names' letters. Select the applicable alteration from the combo box to the right.

Replace

With

Case Sensitive

An enabled check box of these items allows you to replace any string in your file names with the specified one. It works also over several occurrences. In the **Replace** field type in the string that should be replaced. In case the string to be replaced occurs several times, i.e. it is available more than once, you can enter it case sensitive. Then by activating the **Case Sensitive** check box you may rule out any other lower or upper case occurrence. In the field **With** you have to type in the replacement string to be inserted in the file names.

table

With the table at the bottom of the renaming tool you can verify the result of the renaming by comparing the old file name with the new one.

OK

The **OK** button closes the renaming tool and applies the specified changes to the whole sequence of the video clip: All file names will be changed.

CANCEL

Cancels the renaming and closes the tool without changing the file names.

7.1.2 Defragmenter

Spycer provides a built-in defragmenter especially designed to optimize the physical alignment of image sequences (video clips) on storages so that they are more suited for real-time operations.

The alignment of clips on a storage is of special importance when performing real-time operations with clips in HD or larger: The performance of the hard disk(s) is limited and may soon be reached, especially when the storage contains large amounts of data. Then, a real-time operation (play-out or record) may get interrupted due to the facts that files are stored in segments or even fragments on the hard disks and disk drives tend to get slower the fuller they are. With the built-in defragmenter you can defragment any file that is fragmented and, furthermore, align image files of video clips contiguously in larger blocks on the storage which will minimize access times during read procedures.

The built-in defragmenter uses proprietary routines to defragment the data on the storage. The results will not be the same when using the standard defragmentation tool of the operating system, because it will not heed image file sequences. Therefore, do not use it for a defragmentation of a video storage.

It is recommended to defragment storages at regular intervals, even with lesser amounts of data stored on them. Then, newly copied or captured material can be better positioned on the storage and later defragmentation runs have less to deal with.

To run the defragmenter on an SNFS storage you must log on to the computer system with administrative rights for the storage.

With Spycer you can defragment either single files/clips or several ones in one step. To defragment more than one file/clip you can either select several ones in a contents area of the browse and search tools or defragment the main directory or drive that contains them.

With a Spycer that supports SNFS (see section "Program Variants of Spycer" on page 1-6) you can also optimize the free space of a storage. For this initiate a defragmentation of the complete drive/volume. Works only on SNFS storages.

The following details how to assess the defragmentation degree and how to initiate a defragmentation.

Assessing the Defragmentation Status

The defragmentation status of a file/clip can be seen in the browse and search area as well as in the file metadata view of the metadata area.

In the browse and search area you can find this information in a contents area once a file is displayed (see section “The Contents Area” on page 4-6). The text information provided by the file will detail this information (either to the right of a thumbnail or when in its text information view) under the entry 'Defrag':

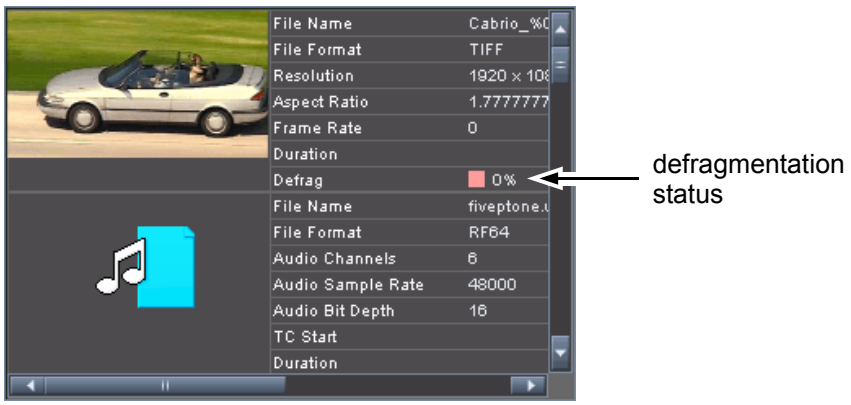


Figure 7-2: Contents area showing the defragmentation status

Additionally, it can be seen in the metadata area (see chapter “Working with Metadata” on page 6-1) when an entry in Spycer is singled out and the file metadata is visible. You can find the defragmentation degree under the entry 'Defragmented' among the general file data.

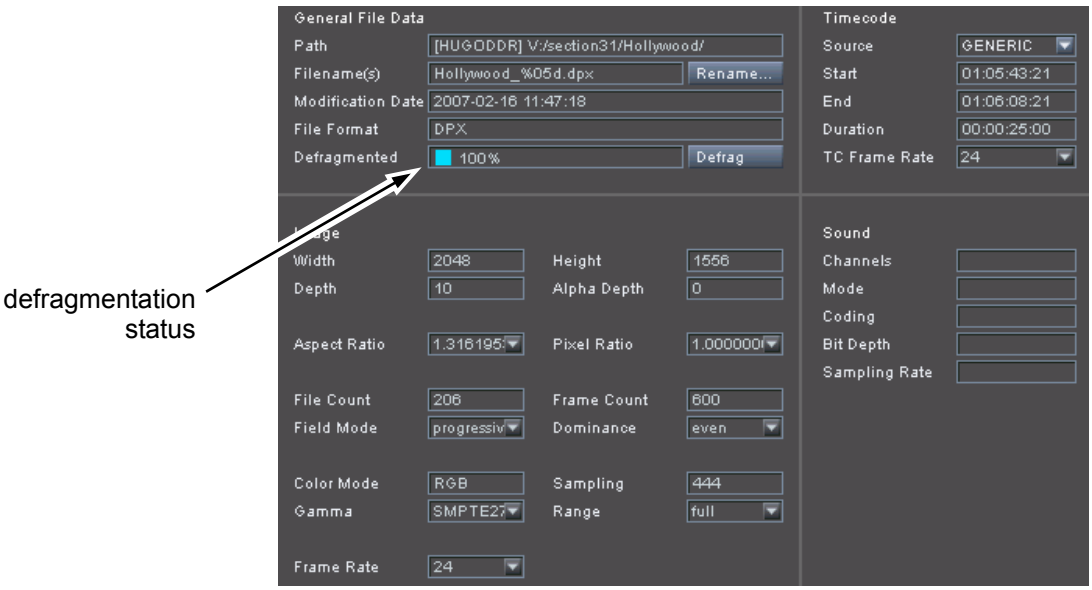


Figure 7-3: File metadata showing the defragmentation status

In Spycer the defragmentation status of a file or clip is indicated with the help of colors and percentage values:

Color	Percent	Explanation
blue	100%	The file/clip is optimally aligned on the storage and none of its data is fragmented.
–	1% - 99%	The clip exists in segments but none of its files are fragmented.
red	0%	The file or at least one image of a clip is stored in fragments on the storage. If this is the case with a video clip, it may cause problems during play-out operations, depending on its resolution and file sizes.

Segmentation: A clip is segmented when its image files are not aligned contiguously in larger blocks on the hard disk array but scattered over the storage.

Fragmentation: Either a file is fragmented or a video clip contains fragmented files. In contrast to segmentation here it is the data of a single file that is scattered over the storage.

Initiating a Defragmentation

A defragmentation can be started in the metadata area with the file metadata view selected or via the browse and search area. Even files of unknown formats are defragmented by the defragmenter of Spycer. To initiate a defragmentation perform either one of the following:

- To initiate a defragmentation from the metadata area:
  With the metadata of the file or clip displayed in the file metadata view of the metadata area select the button **DEFRAG**.
- To initiate a defragmentation from the browse and search area:
  Browse or search for the respective file/clip. When it is displayed in a contents area select from its context menu the menu option ***Defragment*** (see section “The Context Menu” on page 4-9).

This will start a defragmentation of the selected data and an entry in the job list is created (see section “The Job List” on page 7-12). The job entry also shows a progress bar for the defragmentation process. As long as the defragmentation is under way the system will have the status 'busy' (see section “The Status Bar” on page 4-9).

Furthermore when in the browse and search area, you can defragment more than one file/clip with a single step:

– You can select several individual ones when displayed in a contents area, for example, by holding down the [Ctrl] key (*Mac:* [⌘]) while selecting them with the mouse.

  With the search tool you can search for a defragmentation degree. Once displayed in the contents area of the search results, the entries can be selected and then defragmented.

– You can select a main directory or volume that contains these clips in the directory tree of the browse area, which will defragment all files stored at this location (files in subdirectories as well).

Then initiate the defragmentation with the menu option ***Defragment*** from the context menu (see section "The Context Menu" on page 4-9).

With a Spycer that supports SNFS (see section "Program Variants of Spycer" on page 1-6) you can also optimize the free space of a storage. For this initiate a defragmentation of the complete drive/volume. Works only on an SNFS storage.

As long as the defragmentation is in progress, the system will have the status 'busy'. Depending on the amount of data to be defragmented this process may take a while. The defragmentation operation ends automatically as soon as all selected data is processed. Then the files/clips will be perfectly aligned on the storage and show a defragmentation status of 100% (blue).

7.1.3 High-Speed Copying

To copy vast amounts of video material from one storage location to another is often a time consuming procedure when performed with the standard tools of an operating system, such as a file manager. To do this faster DVS integrated in Spycer a high-speed copying program which deals with such tasks in about four times the speed of a standard operating system copy.

The high-speed copying tool is truly integrated in Spycer: It will be started and used as soon as a copying or moving is performed (see section "Copying (Moving) Directories/Files" on page 4-13).

The copying/moving can also be combined with an automatic defragmentation of the copied or moved material. For further information about how to set this please refer to section "The Group 'Jobs'" on page 8-8.

7.1.4 File Format Converter

Spycer provides an integrated e file format converter able to convert still images as well as complete video clips to another file format. Whether you want to convert, for example, a video clip in a container format to an image file sequence or vice versa, this tool deals with such tasks effortlessly. It can be accessed from the context menu of image or video data displayed in the browse or search area:

- In the browse and search area (see chapter “Browsing and Searching” on page 4-1) browse or search for the still image or video clip that should be converted.
- Then select from its context menu the menu option ***Convert...*** (see section “The Context Menu” on page 4-9).

This will open the window of the file format converter of Spycer:

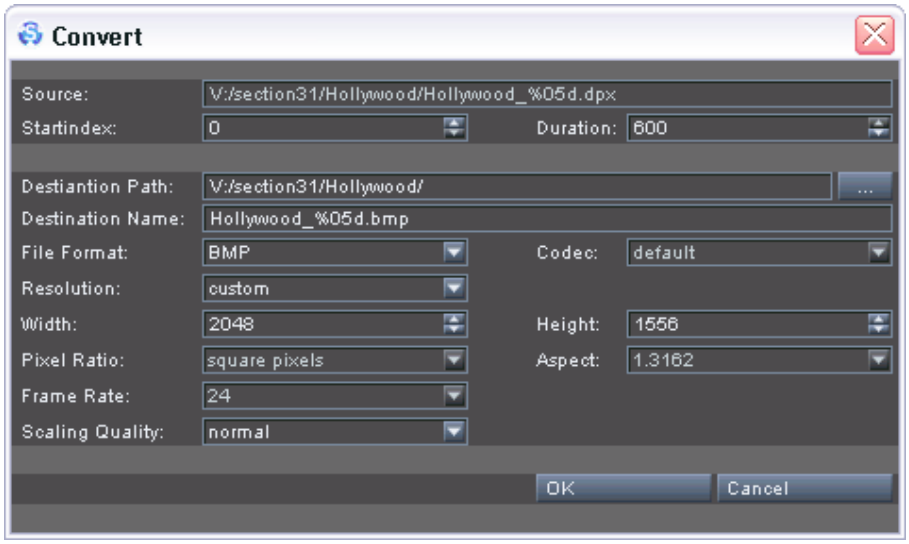


Figure 7-4: The file format converter of Spycer

The source settings, i.e. details about the material that should be converted, are displayed in the upper part of the window. The lower part determines its destination, i.e. such things as name, file format or resolution. The following items are provided:

Source — Indicates the directory and path to the source material. It is already set to the video/image data where the file format converter was called.

Startindex — Allows you to select a different inpoint for the conversion. The conversion will start with this frame number.

Duration — Determines the length of the converted clip, i.e. how many frames to convert from the start index onwards. Its maximum value can be: `<last frame no.>-<start index>+1`.

Destination Path The path to the directory where the converted file(s) will be stored. To set a path you may either type in a path in the entry field or use the button to the right (...) to select one via the opening dialog window.

Destination Name The name of the converted file(s). To create file names with frame numbers you have to observe the C notation, usually with the syntax `<string>%0Yd.<ext>` (see section "The Search Parameter Area" on page 4-16).

File Format Determines the file format of the final material. The respective extension will also be indicated in the field **Destination Name**.

Codec If the selected file format requires a codec it can be selected with this combo box. Whether this setting will be available depends on the selected file format.

Resolution With this field you can determine the video format of the material to be created. Either select from its drop-down list one of the predefined video formats or set it to `custom` to define the resolution yourself.

Width Details the width of the material to be created in pixels. If **Resolution** is set to `custom` it can be adjusted freely.

Height Details the height of the material to be created in pixels. If **Resolution** is set to `custom` it can be adjusted freely.

Pixel Ratio Determines the pixel aspect ratio that should be applied during the conversion. Whether this setting will be available depends on the selected file format.

Aspect Available for informatory reasons. It details the aspect ratio of the set video format, i.e. the ratio of **Width** to **Height**.

Frame Rate Sets the frame rate of the converted material. Whether this setting will be available depends on the selected file format.

Scaling Quality For the conversion you can select between three scaling qualities. It also effects the speed of the conversion. For example, the setting `high` will yield the best quality but will also take longest to process.

OK	The **OK** button closes the file format converter and converts the material according to the settings.
CANCEL	Cancels the conversion and closes the file format converter.

To perform a conversion do the following:

- With the settings items in the window of the file format converter configure the conversion.
- Then initiate the conversion with the button **OK**.

This will write the converted material to the destination directory and an entry in the job list is created (see section "The Job List" on page 7-12). The entry in the job list also shows a progress bar of the conversion process. As long as it is under way the system will have the status 'busy' (see section "The Status Bar" on page 4-9). If the original video/image format of the material differs from the destination format, the image(s) will be skewed accordingly so that they fit optimally in the new format. After the conversion the source file(s) are not deleted but remain at their location for further use.

When converting a video clip to a clip format that consists of still images, the converted files will carry frame numbers as determined by the field **Destination Name**. However, currently all converted material will start with zero (0) as a frame numbering. If necessary they can be given another frame numbering via the renaming tool of Spycer (see section "Renaming" on page 7-2).

7.1.5 Calculator

With the calculator of Spycer you can calculate from a set video format its maximum recording time (by a given amount of storage capacity) or the required storage (by a given duration of video data). It can be accessed from the menu bar of Spycer:

- From the menu bar of Spycer (see section "Overview of the User Interface" on page 3-16) select ***Tools » Calculator…***.

This will open the calculator of Spycer:

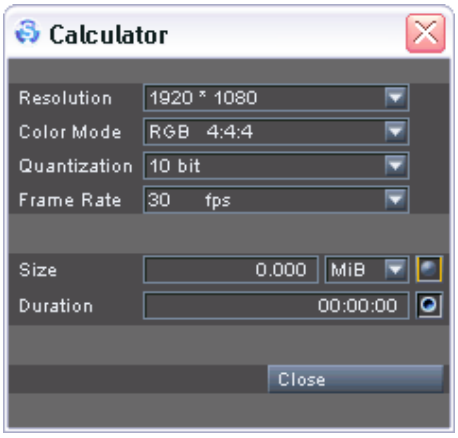


Figure 7-5: The calculator of Spycer

With the upper settings you determine the video format. Once the video format is set, the calculation will be straight forward:

- Select the video format from the settings items by choosing the appropriate values.
- Next you have two possibilities at hand:
  - To determine the maximum length of the video data by a given storage capacity enter in the field **Size** the storage space, or
  - enter in the field **Duration** the duration of the video data if you want to know the required storage space. It has to be entered in timecode format without frames (`hh:mm:ss`)

The calculation will be made as soon as an entry is changed: The remaining value will adjust itself automatically. Once you are finished with the calculation(s), the window of the calculator can be closed with the button **CLOSE**.

With the radio buttons to the right of the fields **Size** and **Duration** you can also determine the way a calculation is performed: To calculate from a given storage to a duration the **Duration** radio button has to be selected, and vice versa.

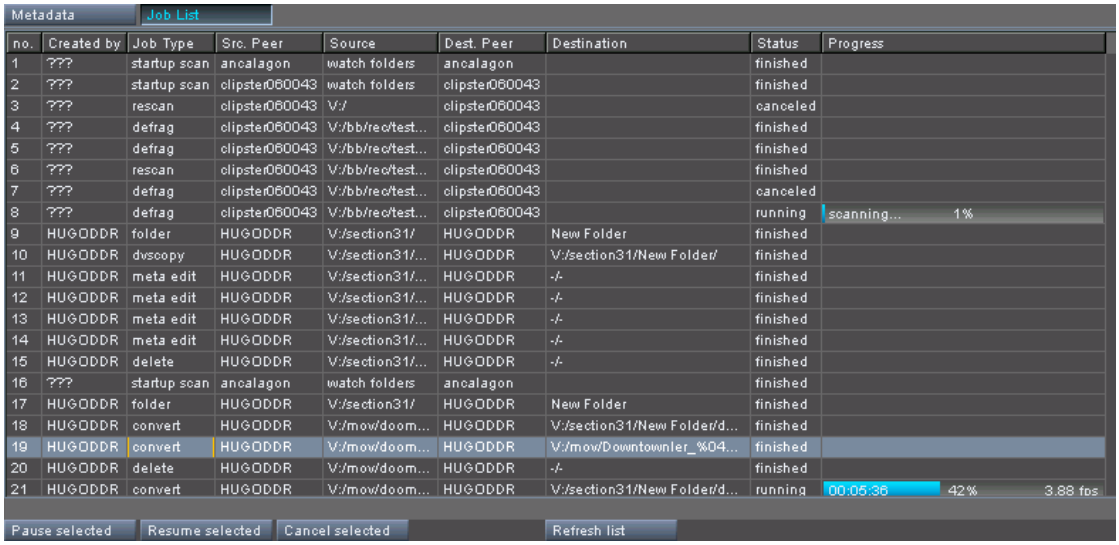
A similar calculation regarding disk spaces of a selected storage can be done in the properties window of a drive or directory (see section “The Properties Window” on page 8-2).

7.2 The Job List

Job List

The job list of Spycer provides information about jobs that are performed on your system or that you have initiated on other systems in the SpycerNet. Additionally, these jobs can be controlled from here, for example, by canceling them. You can switch to the job list of Spycer with the button **JOB LIST** directly below the menu bar.

When the job list is not activated and visible, arriving jobs are indicated by a (three times) flashing **JOB LIST** button.



no.	Created by	Job Type	Src. Peer	Source	Dest. Peer	Destination	Status	Progress
1	???	startup scan	ancalagon	watch folders	ancalagon		finished	
2	???	startup scan	clipster060043	watch folders	clipster060043		finished	
3	???	rescan	clipster060043	V:/	clipster060043		canceled	
4	???	defrag	clipster060043	V:/bb/rec/test...	clipster060043		finished	
5	???	defrag	clipster060043	V:/bb/rec/test...	clipster060043		finished	
6	???	rescan	clipster060043	V:/bb/rec/test...	clipster060043		finished	
7	???	defrag	clipster060043	V:/bb/rec/test...	clipster060043		canceled	
8	???	defrag	clipster060043	V:/bb/rec/test...	clipster060043		running	scanning... 1%
9	HUGODDR	folder	HUGODDR	V:/section31/	HUGODDR	New Folder	finished	
10	HUGODDR	dvscopy	HUGODDR	V:/section31/...	HUGODDR	V:/section31/New Folder/	finished	
11	HUGODDR	meta edit	HUGODDR	V:/section31/...	HUGODDR	-/-	finished	
12	HUGODDR	meta edit	HUGODDR	V:/section31/...	HUGODDR	-/-	finished	
13	HUGODDR	meta edit	HUGODDR	V:/section31/...	HUGODDR	-/-	finished	
14	HUGODDR	meta edit	HUGODDR	V:/section31/...	HUGODDR	-/-	finished	
15	HUGODDR	delete	HUGODDR	V:/section31/...	HUGODDR	-/-	finished	
16	???	startup scan	ancalagon	watch folders	ancalagon		finished	
17	HUGODDR	folder	HUGODDR	V:/section31/	HUGODDR	New Folder	finished	
18	HUGODDR	convert	HUGODDR	V:/mow/doom...	HUGODDR	V:/section31/New Folder/d...	finished	
19	HUGODDR	convert	HUGODDR	V:/mow/doom...	HUGODDR	V:/mow/Downtownler_%04...	finished	
20	HUGODDR	delete	HUGODDR	V:/mow/doom...	HUGODDR	-/-	finished	
21	HUGODDR	convert	HUGODDR	V:/mow/doom...	HUGODDR	V:/section31/New Folder/d...	running	00:05:36 42% 3.88 fps

Figure 7-6: The job list of Spycer

The job list shows tasks that are concerned with your system: either they were triggered from or are carried out on your system. Additionally, it details only those tasks that may render a system 'busy' (see section "The Status Bar" on page 4-9). Whenever such a task is triggered, an entry can be found here. For example, if you start a defragmentation on another system in the SpycerNet (see section "Defragmenter" on page 7-4) or re-scan your watched folders (see section "The Context Menu" on page 4-9), or someone else in the SpycerNet starts a task on your system, it will be noted here. Furthermore, as long as the task is not finished, each entry informs you about its progress in the last column of the list, for example, with the help of a progress bar. Then, it may detail the time remaining, its progress in percent and the data rate:

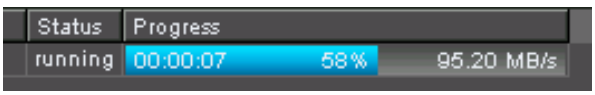


Figure 7-7: Job in progress

In detail the table of the job list provides the following information:

Column	Explanation
No.	Number of the listed job.
Created by	Details the system that triggered the task.
Job Type	The type of job that has been triggered is stated in this column, e.g. copy, dvscopy, move, delete, scan, etc.
Src. Peer	The source peer. Details the source of the data in the SpycerNet, i.e. the name of the system where the source data is stored.
Source	States the location of the source files on the source peer.
Dest. Peer	The destination peer. Details the destination of the data in the SpycerNet, i.e. the name of the system where the data is to be transferred to.
Destination	Details the target directory on the destination peer.
Status	Indicates the state of the respective job, such as paused, running, canceled, finished, failed, etc.
Progress	Informs you about the progress of the job. Processes that take longer are displayed with the help of a progress bar (see above).

The jobs in the job list are listed in the order they were initiated from top to bottom, i.e. the latest jobs are listed at the bottom of the job list. When several jobs are started on a system, they will be processed one at a time in the sequence stated in the job list. Jobs that wait for one task to finish have the state 'pending'.

With the buttons below the job list you can control the list as well as running and pending jobs. To select a job simply click on its entry in the job list (see also section "Keyboard Shortcuts" on page A-8):

PAUSE SELECTED	Pauses the selected job(s).
RESUME SELECTED	Either continues a paused job or starts a pending one.
CANCEL SELECTED	Cancels and aborts the selected job(s).
REFRESH LIST	Clears the table, running and pending jobs will be detailed again.

Miscellaneous

This chapter details other items of the software, such as the properties window or the configuration settings available for Spycer. Additionally, it provides a reference to its menu bar as well as a description of some maintenance tools and tasks that may be useful when experiencing problems with the Spycer application.

8.1 The Properties Window

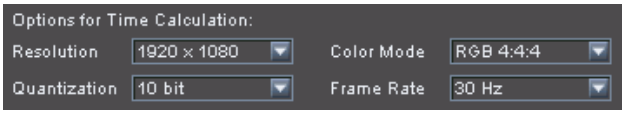
With the menu option ***Properties...*** on the context menu of a file, directory or drive visible in the browse and search area (see chapter "Browsing and Searching" on page 4-1) you can call up the properties of the respective item. They will be shown in the properties window:

Figure 8-1: Example of a 'Properties' window

At the top of the window you can find information about the item's name, the type of data and its storage location.

However, depending on the data type of the item where the properties are called, the properties window will look differently beneath these information and provide other details:

Data Type(s)	Shown Properties
systems	When called on systems, the properties will detail further information about this system, such as its hardware, operating system, the Spycer version running, and the permissions that you have on the respective system.

Data Type(s)	Shown Properties
volumes directories	When called for volumes or directories you can find further details about the storage where the item is located as well as about its capacity. Detailed are, for example, the free, used and total disk space in binary multiples of their sizes (binary prefixes). Additionally, time values are provided to show you, for instance, the amount of free space available for a record of video. Because these depend on a video raster, you can configure raster settings in this view of the properties window as well. The time values of the disk spaces will be changed accordingly:  *Figure 8-2: Time calculation settings for disk spaces* Furthermore, a bar is available that tells you graphically as well as via a percentage value the amount of disk space currently used on the drive where the item is stored. Storage capacities are indicated as they are truly available, meaning they are detailed without the deduction of a safety margin necessary to ensure the real-time capability on a DVS video system.
files clips	When called for files or video clips, the properties window will provide various metadata information in a table view, such as file size, file name and its format. Additionally, depending on the type of file, it may as well detail such things as number of audio channels, audio samples, color mode, aspect ratio, field mode, resolution, and so on.

When accessing properties of items on other systems in the network, question marks ('?') may appear instead of properties. Then give Spycer time to update the information. During this the properties window may remain open and once the data has been gathered they will be displayed.

The properties window can be closed at any time with the button **CLOSE** at the bottom of the window.

8.2 Configuring Spycer

This section describes the general configuration settings of Spycer. Among them you can find, for instance, the remote access permissions and the network configuration settings.

Because most of these settings have already been set during the initial setup procedure, the following provides a description of the settings items only. For any further information about the settings please refer to section “Initial Setup of Spycer” on page 3-9.

8.2.1 Accessing the Configurations and Overview

To set any of the general configuration settings of Spycer you have to access them first. For this perform the following:

- From the menu bar of Spycer (see section “Overview of the User Interface” on page 3-16) select ***Options » Config…***.

This will open the general configuration settings of Spycer:

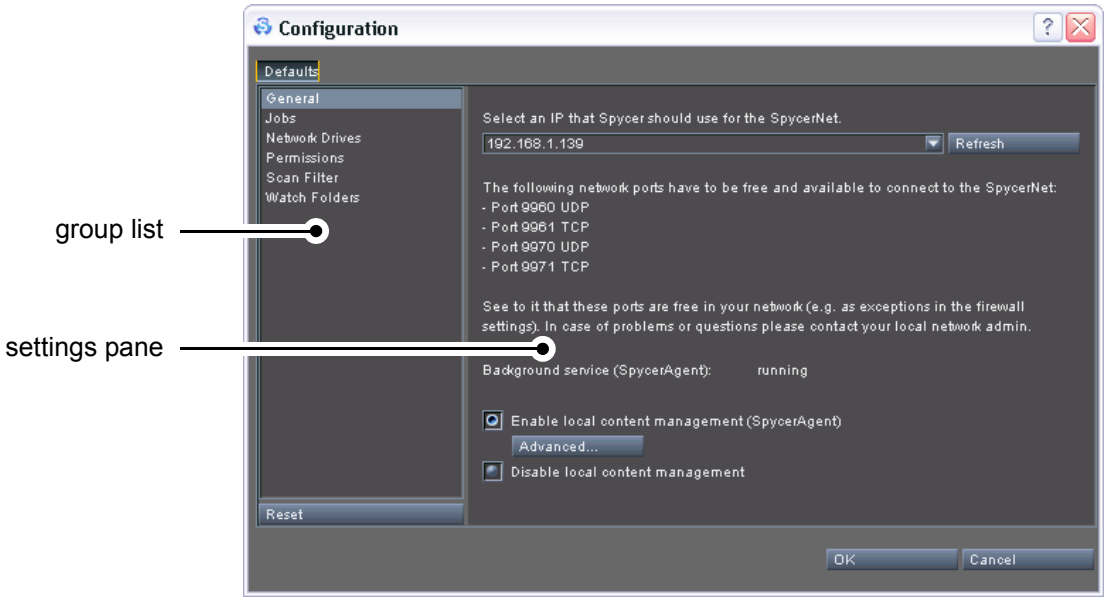

group list
settings pane
Configuration
Defaults
General
Jobs
Network Drives
Permissions
Scan Filter
Watch Folders
Reset
Select an IP that Spycer should use for the SpycerNet.
192.168.1.139
Refresh
The following network ports have to be free and available to connect to the SpycerNet:
- Port 9960 UDP
- Port 9961 TCP
- Port 9970 UDP
- Port 9971 TCP
See to it that these ports are free in your network (e.g. as exceptions in the firewall settings). In case of problems or questions please contact your local network admin.
Background service (SpycerAgent): running
Enable local content management (SpycerAgent)
Advanced...
Disable local content management
OK
Cancel

Figure 8-3: Starting screen of the configuration settings

The window to set the general configurations provides the following items:

group list	On the left side of the configuration window you can find a group list that provides access to the different settings. They will be valid for the Spycer software in general. Once an entry in the list is selected, the settings pane to the right will alter its appearance and the configuration items of the respective group are displayed. You can then change the settings of this group.
settings pane	The settings pane shows the settings that are available under the selected group (group list to the left). To change the settings alter the configurations in the settings pane and confirm your alterations with the **OK** button.
RESET	A click on this button resets all values back to the last confirmed settings.
OK	This button confirms your alterations to the settings in the configurations window and closes it. Then the new settings will be in effect. They will be saved when the Spycer user interface is closed (see section "Exiting the Software" on page 3-23).
CANCEL	The button **CANCEL** closes the window for the general configuration settings without confirming your settings. The Spycer application will use the latest confirmed settings.

8.2.2 The Group 'General'

With the group ***General*** you configure the networking and local content management of Spycer.

With the network settings you determine the connection of your Spycer application to the SpycerNet.

The local content management will be administered by the background process SpycerAgent. When it is enabled, the SpycerAgent will write information about the contents of the watch folders (see section "The Group 'Watch Folders'" on page 8-13) into a database, making it available to your Spycer application as well as to others in the SpycerNet (if applicable and permissions are given). Afterwards the watch folders will be monitored and the database will be revised once file processes are detected.

When a local content management is disabled, Spycer will not display any local drives or storages. Then the user interface can be used as a network browser showing the contents of other Spycers in the SpycerNet only.

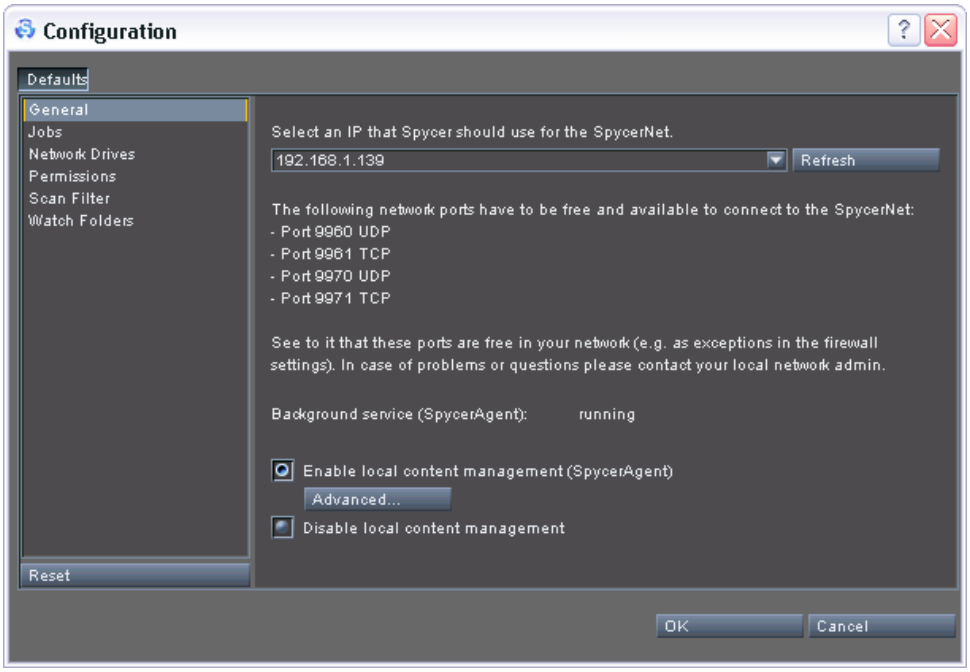

Configuration
Defaults
General
Jobs
Network Drives
Permissions
Scan Filter
Watch Folders
Reset
Select an IP that Spycer should use for the SpycerNet.
192.168.1.139
Refresh
The following network ports have to be free and available to connect to the SpycerNet:
- Port 9960 UDP
- Port 9961 TCP
- Port 9970 UDP
- Port 9971 TCP
See to it that these ports are free in your network (e.g. as exceptions in the firewall settings). In case of problems or questions please contact your local network admin.
Background service (SpycerAgent): running
Enable local content management (SpycerAgent)
Advanced...
Disable local content management
OK
Cancel

Figure 8-4: The settings items of the group 'General'

In the group ***General*** you can find the following settings items:

combo box	Select from the combo box the IP address, i.e. the network connection, that Spycer should use to connect to the SpycerNet. The localhost address (127.0.0.1) disables the network connection for Spycer. Afterwards it can be used locally only.
REFRESH	This button refreshes the IP addresses available in the combo cox. IP addresses are gathered from currently active network connections. When a network connection is inactive (e.g. no cable connected), its IP address will not be displayed. Then establish a network connection at the respective connector and click the **REFRESH** button which will make its IP address available in the drop-down list of the combo box.
Status message	Details the current state of the background process SpycerAgent.

Enable local content management (SpycerAgent)

With this radio button activated the local content management will be enabled. It installs and starts the background process SpycerAgent allowing you to view local drives and search through the material stored in the watch folders. For this a database is written that is used by the Spycer user interface to display data. Additionally it is visible and usable for other Spycer applications in the SpycerNet (if applicable and permissions are given).

ADVANCED...

The background process SpycerAgent may not be able to access drives that need a particular user account (usually administrative account). Background processes generally run with the security context of the local system account which is a predefined account used by background processes. To enable accesses of the SpycerAgent to specially secured locations enter the appropriate user name and password (if applicable) in the window that opens when the **ADVANCED...** button is pressed. On a SAN this is normally not necessary when a global super user is configured via its metadata server.

Use these settings only if you experience access permission issues that can be traced back to the SpycerAgent.

Windows only: For this make sure that the respective user has the right to fully access the background process (see ***Administrative Tools » Local Security Policy* » Local Policies » User Rights Assignment » Log on as a service**).

Disable local content management

This radio button disables the local content management. It will stop and deinstall the background process SpycerAgent. Then Spycer can be used as a network browser only, showing you the contents of other Spycers in the SpycerNet.

Under Linux/Mac you have to log on to the system as root to administer the background process.

For further details about the SpycerAgent please refer to section “SpycerAgent” on page 2-5. For further details about networking see section “Notes about Networking with Spycer” on page 2-8.

8.2.3 The Group 'Jobs'

The group ***Jobs*** contains some settings concerned with jobs performed by the SpycerAgent, most notably the proxy file settings.

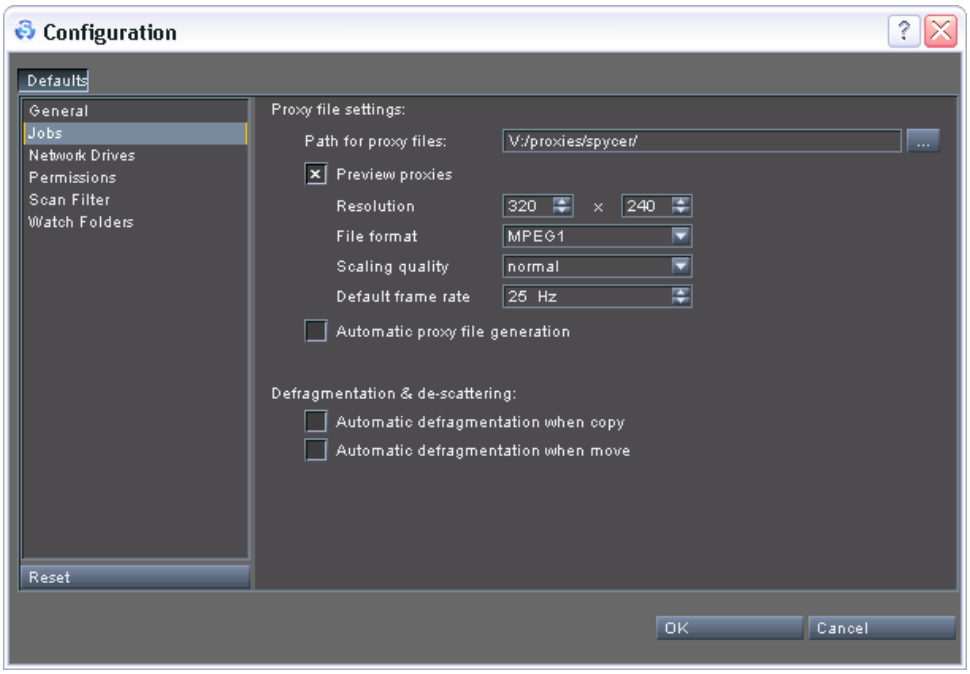


Figure 8-5: The settings items of the group 'Jobs'

In detail the group ***Jobs*** provides the following settings items:

Path for proxy files Determines the location on the storage where the proxy files will be stored. In it the directory structure of the watch folders where the clip is originally stored is reproduced which makes an identification of the proxy clips easy.

Temporarily downloaded proxy clips are not stored here but in one of the system folders (see section “Interesting Files and Folders” on page A-9).

Preview proxies	Activates the proxy generation. When the check box is enabled, proxies can be generated on your system. Then the configuration items for the proxies will be available and can be set. If the check box is disabled, a proxy creation cannot be performed on your system.
Resolution	Details the resolution of the proxies in width and height (in pixels). This setting will be available when **Preview proxies** is enabled.
File format	Select from this combo box the file format of the container file format that will be used to create the proxies. This setting will be available when **Preview proxies** is enabled.
Scaling quality	For the proxy generation you can select between three scaling qualities. It also effects the speed of the creation. For example, the setting `high` will yield the best quality but will also take longest to process. This setting will be available when **Preview proxies** is enabled.
Default frame rate	Sets the default frame rate of the proxy files. This setting will be available when **Preview proxies** is enabled.
Automatic proxy file generation	When this check box is enabled, proxy files are generated automatically on your system as soon as new clips are detected by the SpycerAgent. If it is disabled, proxies can only be created manually with the menu option ***Create proxy*** (see section "The Context Menu" on page 4-9). This setting will be available when **Preview proxies** is enabled.
Automatic defragmentation when copy	With this check box you configure the Spycer application to perform a defragmentation automatically on the processed material when a copy process is started on your system. This will be valid even if the job is triggered by another Spycer in the SpycerNet.
Automatic defragmentation when move	With this check box you configure the Spycer application to perform a defragmentation automatically on the processed material when a move process is started on your system. This will be valid even if the job is triggered by another Spycer in the SpycerNet.

8.2.4 The Group 'Network Drives' (Windows Only)

The group ***Network Drives*** is available under Windows operating systems only and enables you to access mounted (mapped) network drives in the user interface of Spycer. They are then displayed as any other locally available drive/directory that is not defined as a watched folder (see section “The Directory Tree” on page 4-3) and can be accessed as such (see section “SpycerAgent” on page 2-5).

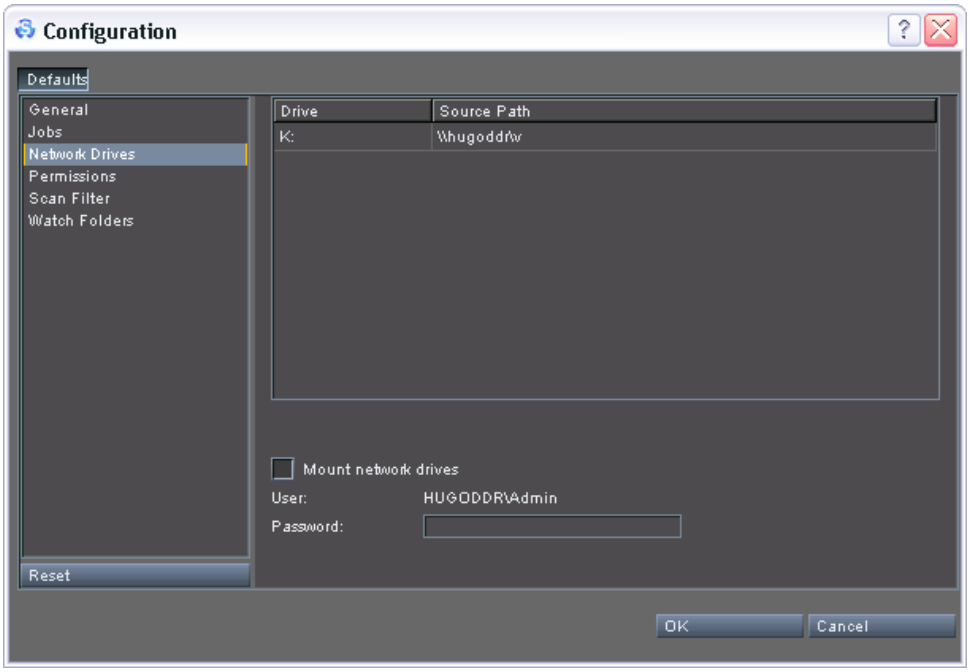


Figure 8-6: The settings items of the group 'Network Drives'

The group ***Network Drives*** provides the following items:

list	The list details the network drives that are currently mounted in your operating system. The column 'Drive' details the drive letter, while the column 'Source Path' indicates the path to the drive/directory in the network.
Mount network drives	This check box mounts the network drives detailed in the list above and, once confirmed, they will be displayed in Spycer. For this you have to enter the correct password that allows you access to the network drives in the entry field **Password** below.

The network drives will also be mounted the next time Spycer is started. However, then a message window will appear right after the starting of the user interface where you have to legitimize your access again, i.e. you have to enter the correct password once more:

Figure 8-7: Accessing network drives during start-up

User Details your current user name that will be used to mount the network drives.

Password In this entry field you have to enter the correct password that in combination with the user name allows you to access the network drives.

8.2.5 The Group 'Permissions'

With the group ***Permissions*** you set the remote access permissions, i.e. you configure a remote control of your Spycer application. It may be useful if other Spycer applications in the SpycerNet should have access to your system, and with these settings you determine what other peers are allowed to do on your system.

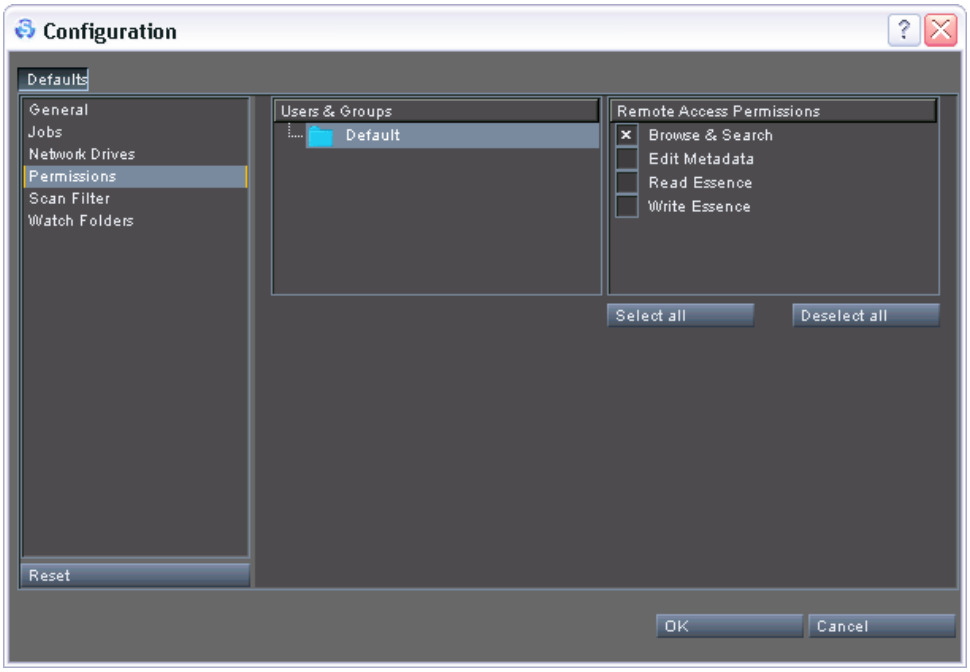


Figure 8-8: The settings items of the group 'Permissions'

The following settings items are provided:

User & Groups — In this pane select the user or group that you want to specify the remote access permissions for.

Currently only the default user group is available.

Remote Access Permissions — Under this pane you can set the permissions of the user/group that has been selected in the pane **User & Groups**. For a detailed list of the access permissions and what they indicate see section "Remote Access Permissions" on page 3-14.

SELECT ALL — This button enables all check boxes in the pane **Remote Access Permissions** in one step.

DESELECT ALL — This button disables all check boxes in the pane **Remote Access Permissions** in one step.

For further information about these settings see section "Remote Access Permissions" on page 3-14 and section "Notes about Networking with Spycer" on page 2-8.

8.2.6 The Group 'Scan Filter'

This setting allows you to determine sequence file types, i.e file formats that Spycer should display as video sequences and thus as single entries. It sets a filter for the scanning of the SpycerAgent. In order to recognize files of the listed file formats as image sequences each file name must contain a numbering (frame numbering) of the same length.

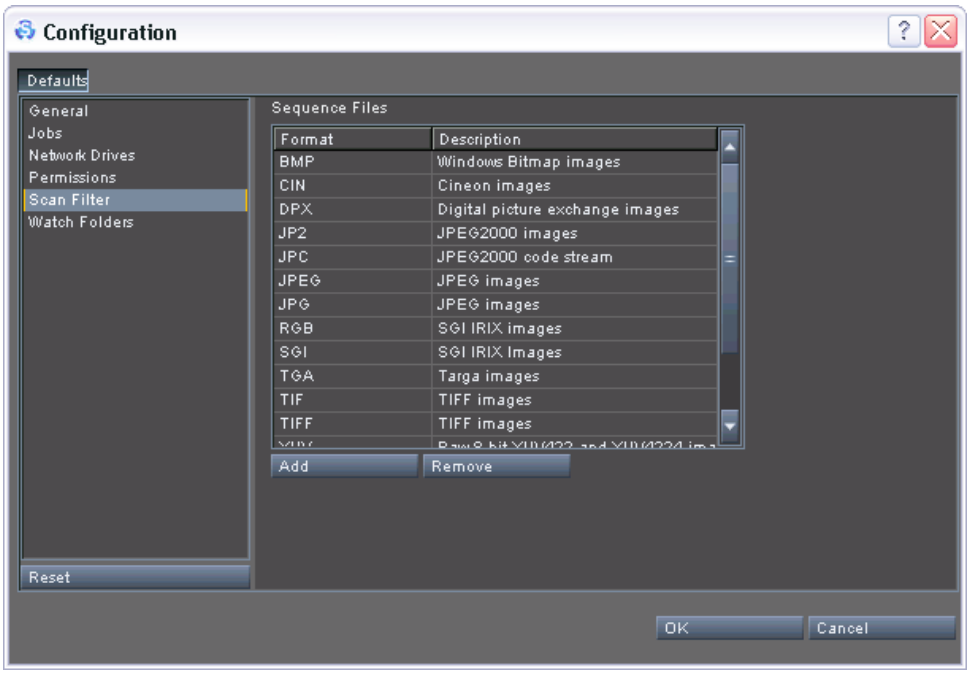


Figure 8-9: The settings items of the group 'Scan filter'

The following settings items are provided by the group ***Scan Filter***:

list	The list determines the file formats by their extensions (column 'Format') that Spycer should recognize as video clips. The entries can be revised by simply double-clicking an entry and altering it.
ADD	This button adds an empty entry in the list above. Then type in the extension of the file format that Spycer should recognize as a video clip.
REMOVE	This button deletes entries from the list: Select an entry in the list and delete it by clicking the button **REMOVE**.

8.2.7 The Group 'Watch Folders'

With the settings items of the group ***Watch Folders*** you determine the locations that will be watched by the background process SpycerAgent

(see section “The Group 'General'” on page 8-5). The data that is stored there will be available for a local content management (e.g. during search procedures) to your Spycer application as well as to others in the SpycerNet (if applicable and permissions are given).

Network drives and important system drives/directories cannot be selected as watch folders.

The SpycerAgent registers all events that take place in the watch folders. To minimize the overall traffic for the SpycerAgent it is recommended to include directories/drives that contain video/audio material only.

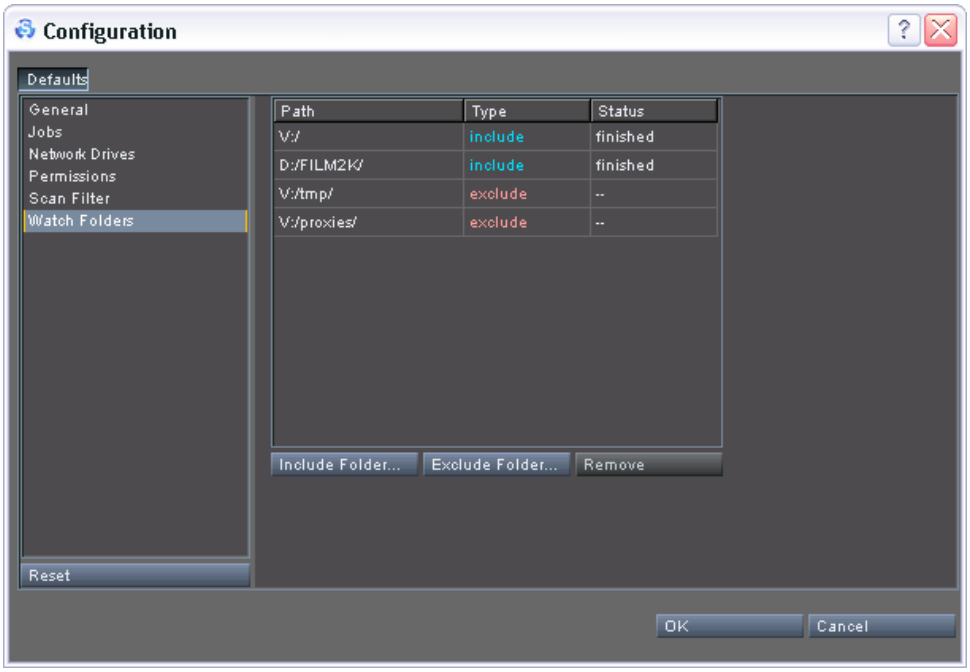


Figure 8-10: The settings items of the group 'Watch Folders'

To set up the watch folders the following settings items are provided:

list	The list details the specified folders (column 'Path'), whether they are included or excluded in the watched folders ('Type') and the current state of the included folders ('Status').
INCLUDE FOLDER...	This button opens a dialog window where you have to select a directory. Choose with it the drive/directory that should be included in the watched folders.

EXCLUDE FOLDER... Excludes a drive/directory from being displayed in Spycer. Usually the exclusion of a specific directory is made to save it from being scanned into the database (as a subdirectory of an included folder). However, with this you can exclude any drive/directory whereupon they will not be displayed in Spycer. A click on this button opens a dialog window where you can select the drive/directory that should be excluded.

REMOVE The included and excluded folders can be revised with this button: Select an entry in the list and delete it by clicking the button **REMOVE**.

The list provided by the group ***Watch Folders*** implicitly details three states of the folders if a local content management is enabled. The following shortly summarizes their effects:

State of Watched Folder	Effect
included	– Scanned by the background process and written to the database – Displayed almost instantaneously in the user interface – Can be searched with Spycer – Displayed and usable in the SpycerNet (if applicable and permissions are given)
not detailed in list	– Other local drives and directories – Not scanned by the background process and not written to the database – Displayed in Spycer only when accessed – Not displayed in the SpycerNet – File-based processes are allowed
excluded	– Not scanned by the background process and not written to the database – Not displayed in the user interface of Spycer or the SpycerNet

8.3 Menu Bar Reference

At the top of a stand-alone Spycer application you can find a menu bar. It provides access to functions and tasks of an administrative nature to the Spycer application. Here you can find, for example, its configuration settings as well as several tools.

This section provides a reference to its menu bar. All menus and menu options will be explained briefly.

This section explains the menu bar as it is available on Windows and Linux. For a reference where to find the individual menu options on Mac systems see section “The Menu Bar on Mac OS” on page 8-16.

8.3.1 The Menu Bar on Mac OS

The menu bar as it is explained in the following sections is not available on Mac systems. Instead the individual menu options can be found integrated in the standard program menu bar.

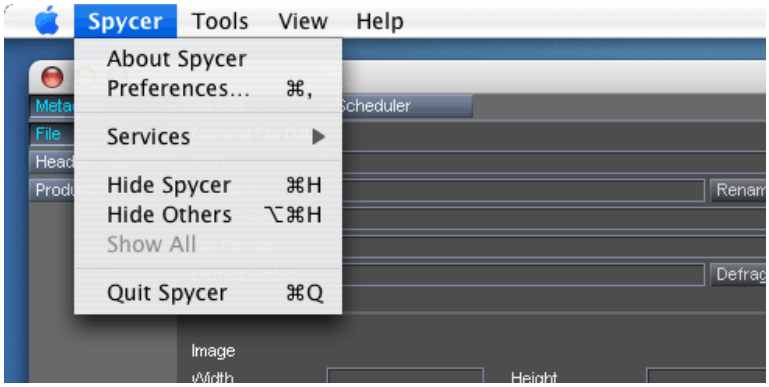


Figure 8-11: The program menu bar of Mac OS

This section details where to find the menu options compared to the Linux/Windows versions of the software:

Location on Linux/Windows		Location on Mac OS
Spycer »	***Full screen***	***View » Full screen***
	Minimize	***View » Minimize***
	Quit	***Spycer » Quit Spycer***
Options »	***Config...***	***Spycer » Preferences***

Location on Linux/Windows			Location on Mac OS
Tools »	***Calculator...***		***Tools » Calculator***
	License Management »	***Request...***	***Tools » License Management » Request...***
		Update...	***Tools » License Management » Update...***
		License Server...	***Tools » License Management » License Server...***
View »	***Reset Layout***		***View » Reset Layout***
	Maximize Preview Area		***View » Maximize Preview Area***
Help »	***About***		***Spycer » About Spycer***
	Manual		***Help » Manual***

8.3.2 The 'Spycer'/Spycer Icon Menu

The menu ***Spycer*** contains the following menu options:

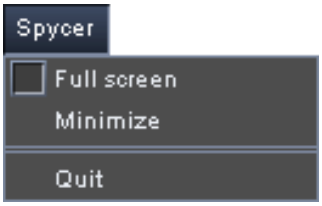


Figure 8-12: The 'Spycer' menu

In fullscreen mode (see section "Full screen" on page 8-17) the menu ***Spycer*** will be replaced by the Spycer icon (Linux and Windows only). However, then it still provides the same menu options as the menu ***Spycer*** shown in the figure above and detailed in the following.

Full screen

Select the menu option ***Full screen*** to activate the fullscreen mode of Spycer. In fullscreen mode the menu ***Spycer*** will be replaced by the Spycer icon (Linux and Windows only) but still provides access to the same menu options.

Figure 8-13: Spycer icon providing the same menu options (Linux/Windows)

Minimize

To access other programs that are installed on your system when Spycer runs in the fullscreen mode, click the ***Minimize*** menu option on the menu ***Spycer***. It reduces the Spycer user interface to a button on the taskbar of the operating system.

Quit

The menu option ***Quit*** exits the Spycer user interface. Further details about this can be found in section "Exiting the Software" on page 3-23.

8.3.3 The 'Options' Menu

The ***Options*** menu provides a menu option to set up and configure the Spycer application. It contains the menu option as shown below:

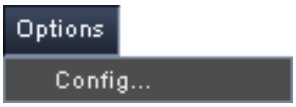


Figure 8-14: The 'Options' menu

It will be described in the following.

Config...

With the menu option ***Config...*** you can access the general configuration settings of the Spycer application. You can find further information about them in section "Configuring Spycer" on page 8-4.

8.3.4 The 'Tools' Menu

On the ***Tools*** menu you can find several tools to facilitate the usage of the Spycer application. It provides the following menu options:

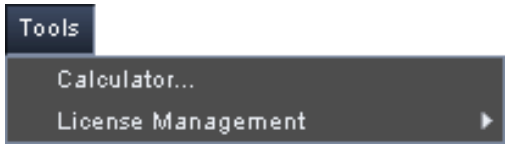


Figure 8-15: The 'Tools' menu

They will be described in the following.

Calculator...

With the calculator of Spycer you can calculate from an adjustable setting of video formats its maximum recording time (by a given amount of storage space) or the required storage (by a given duration of the video data). It is described in more detail in section "Calculator" on page 7-10.

License Management

The ***License Management*** menu option allows you to configure your connected dongle and its license(s). It opens a submenu with the following options:

Figure 8-16: Submenu of the menu option 'License Management'

The ***Request...*** and ***Update...*** menu options are used in case you have to update your local dongle, for instance, to enable new features or change an evaluation license to a non-expiring one. For details refer to section "How to Update the License on the Dongle" on page 2-12.

With the menu option ***License Server...*** you make a set of floating licenses available to other Spycers in a network. Further information about this and how to do it can be found in section "Floating License" on page 2-13.

8.3.5 The 'View' Menu

With the menu ***View*** you can change the layout of the user interface in certain ways. It contains the following menu options:

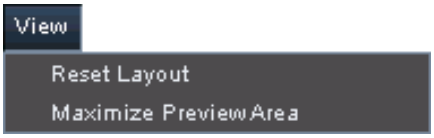


Figure 8-17: The 'View' menu

They will be described in the following.

Reset Layout

In case you have changed the layout of the user interface, for example, by hiding areas (see section "Changing the Layout of the User Inter-

face" on page 3-22), it can be reset with this menu option. Then the layout of the user interface will be set to a default layout and all areas will be visible again.

Maximize Preview Area

This menu option performs the same operation as the ***Maximize*** menu option of the video overlay's context menu in the preview area (see section "The Video Overlay" on page 5-5), i.e. it maximizes the view on the preview area. To restore the layout you can use the menu option ***Reset Layout*** (see above) or the menu option ***Minimize*** on the context menu of the preview area (see section "The Video Overlay" on page 5-5).

8.3.6 The 'Help' Menu

You can get additional information about the Spycer application via the menu option of the menu ***Help***. It contains the following menu options:

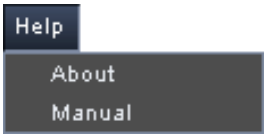


Figure 8-18: The 'Help' menu

They will be described in the following.

About

You can receive further information about the Spycer software with the menu option ***About*** on the menu ***Help***:

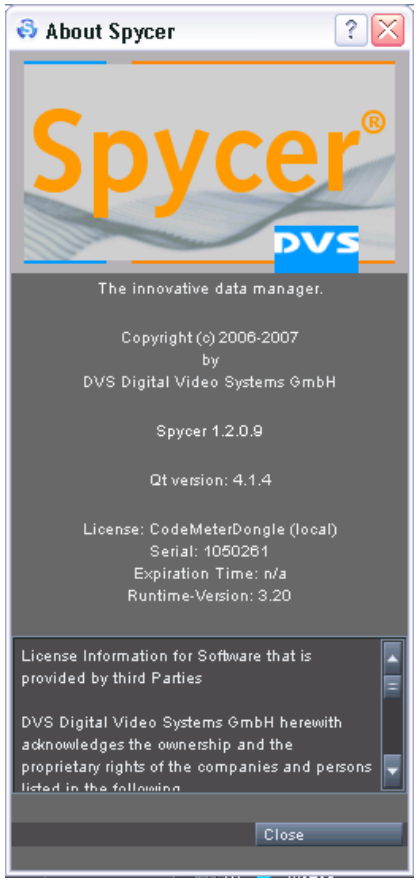


Figure 8-19: The 'About Spycer' window

In the opening window you can find, for example, the precise version number of the software or additional license information (e.g. the serial number of the dongle or the expiration date and time). The latter may be useful to troubleshoot license issues.

Manual

The online documentation of the Spycer application can be accessed via the menu option ***Manual*** on the ***Help*** menu. It opens the documentation in HTML format.

The manual is also available in PDF format which is most suited if you want to print out the document. The documentation of Spycer in PDF format can be accessed easily via the navigation buttons at the bottom of each HTML page.

8.4 Maintenance

The Spycer application, especially when working in a network, is a complex set of individual programs. Because of this DVS provides some maintenance tools which will help you in the event of service and maintenance work. All the software programs described here are available for this purpose only. In your daily work with Spycer they should be of no use.

Before applying anything of the following please refer to section “Troubleshooting” on page A-2 to see whether it is really necessary.

8.4.1 The SpycerAgent Script/Tool

When a local content management is enabled, the SpycerAgent will be the most important part of the Spycer application. It is a process (*Mac/Windows:* service, *Linux:* daemon) running in the background of your system and administering the local data and its database.

Further information about the SpycerAgent can be found in section “SpycerAgent” on page 2-5.

To administer the background process DVS offers you under Linux and Mac operating systems a SpycerAgent script and under Windows the SpycerAgent tool.

The SpycerAgent Script (Linux/Mac)

Under Linux and Mac OS the SpycerAgent process can be administered via a script. It can be called from any command line by entering:

Linux: `/etc/init.d/spyceragent <command>`

Mac: `/Library/StartupItems/Spycer/SpycerAgent <command>`

With the SpycerAgent script you can control the SpycerAgent and, for instance, start or stop it.

The standard operating system tools to administer a background process can be used as well to control the SpycerAgent.

The files *IP.conf* and *Service.conf* (see section "Interesting Files and Folders" on page A-9) are configuration files of the SpycerAgent. By restricting access to them you can deny other users the possibility to alter the IP or service/daemon configurations.

To install or deinstall the background process use the Spycer user interface (**Enable/Disable local content management**, see section "The Group 'Watch Folders'" on page 8-13).

The following lists the available commands (<command>) for the SpycerAgent script:

`start`	When the SpycerAgent is installed as a background process, it can be started with this command. Afterwards it will be running on your system administering the data and database.
`stop`	Once the background process is started, it can be stopped with this command. Afterwards it is no longer running and the connection to the SpycerNet will be lost. However, after a reboot it will be started automatically again.
`restart`	This command stops the process and afterwards starts it again.
`status`	With this command the current state of the SpycerAgent is returned, i.e. whether it is started or stopped.

The SpycerAgent Tool (Windows)

Under Windows DVS offers you with the SpycerAgent tool a graphical user interface to administer the service. It can be started by performing the following:

- Select from the **START** button menu of Windows in the submenu ***DVS*** the entry ***Maintenance***.
- From the opening submenu select the entry for the SpycerAgent tool (for example, ***All Programs » DVS » Maintenance » SpycerAgent Tool***).

This will start the SpycerAgent tool:

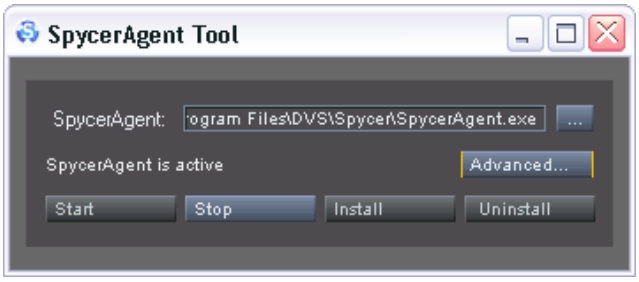


Figure 8-20: The SpycerAgent tool

With the SpycerAgent tool you can control the SpycerAgent and, for instance, start or stop it.

The standard operating system tools to administer a service can be used as well to control the SpycerAgent.

It provides the following items:

SpycerAgent — This entry field states the path on your system to the background service as well as its file name. To select another SpycerAgent you can either enter another path/file name or use the button to the right (...) to select one via the opening dialog window.

ADVANCED... — This button provides the same functionality as the **ADVANCED...** button of the general configuration settings. For a description please refer to section "The Group 'General'" on page 8-5.

START — After installing the service (button **INSTALL**) it has to be started. This can be made with the **START** button. Afterwards it will be running on your system administering the data and database.

STOP — Once the service is started (button **START**), it can be stopped with this button. Afterwards it is no longer running and the connection to the SpycerNet will be lost. However, after a reboot it will be started automatically again. A stopping of the service will make the **UNINSTALL** button available.

INSTALL — A service must be installed before it can operate. This can be done with this button. When the SpycerAgent is installed, it will be started automatically during the loading of the operating system. To start it now the button **START** has to be pressed (available after an installation of the service).

UNINSTALL To un- or deinstall the service SpycerAgent you may use this button. Afterwards it will no longer be started during the loading of the operating system. The button **UNINSTALL** will be available once the service is stopped.

In the middle of the window the current state of the SpycerAgent is detailed. However, when the SpycerAgent tool is running and the state of the service changes in the meantime, it will not be noticed by the tool automatically. In this case you have to update the status message as well as the state of the window by pressing the key [F5] (refresh). Any changes in the state of the SpycerAgent will be detailed by the status message and the state of the tool's controls may change.

8.4.2 The CodeMeter Control Center

CodeMeter is another name for the dongle providing the license for your Spycer application (see section "License Issues" on page 2-10). It comes with a control center and web server application for a more detailed configuration of the dongle. This section describes how to access the CodeMeter Control Center:

Because the control center and the web server application configure the dongle as well as its network capabilities do not change any of their default configurations unless you are absolutely sure about the outcome, or are instructed to by your distributor or the DVS service department.

The web server application by CodeMeter can be accessed from the user interface of the CodeMeter Control Center (button **WEBADMIN**).

You can get further information about the control center as well as the web server application via the help information which can be accessed once the user interface of the control center is displayed.

Accessing the Control Center under Linux

To open the CodeMeter Control Center under Linux perform the following:

- Select from the system menu of Linux the entry ***Utilities » CodeMeter Control Center***.

This will start the user interface of the control center for the dongle.

Accessing the Control Center under Mac OS

To open the CodeMeter Control Center on a Mac system perform the following:

- Select from the *Applications* folder of Mac OS the entry *CodeMeter.app*.

This will start the user interface of the control center for the dongle.

Accessing the Control Center under Windows

To open the CodeMeter Control Center under Windows perform the following:

- Select from the **START** button menu of Windows in the submenu ***CodeMeter*** the entry ***CodeMeter Control Center*** (for example, ***All Programs » CodeMeter » CodeMeter Control Center***).

This will start the user interface of the control center for the dongle.

8.4.3 Gathering Diagnostic Information

To aid a debugging the Spycer application stores log files which detail the actions performed by and with the program. You may get asked by the DVS service department to send in these files in case you experience operation problems with Spycer. This section explains how to gather the log files and how to provide DVS with this information.

Gathering the Log Files

To gather the log files stored during your usage of Spycer you have to access the following directories on your system:

Directory	*Linux:*	*/var/opt/DVS/Spycer/log*
	Mac:	*/Library/Application Support/DVS/Spycer/log*
	Windows:	*C:\Documents and Settings\All Users\Application Data\DVS\Spycer\log*
Details:	The files in this directory log the actions of the built-in defragmenter (files *Defrag-<timestamp>.log*, see also section “Defragmenter” on page 7-4) and of the SpycerAgent (*Agent-<timestamp>.log*, see also section “SpycerAgent” on page 2-5). Only the last ten files of each log will be kept.	

Directory	*Linux:*	*/home/<user>/.DVS/Spycer/log*
	Mac:	*/Users/<user>/Library/Application Support/DVS/Spycer/log*
	Windows:	*C:\Documents and Settings\<user>\Application Data\DVS\Spycer\log*
Details:	When the Spycer user interface is started, a log file is written detailing all actions performed by and with the user interface. When exiting Spycer, the log file is finished and saved. Only the last ten files will be kept.	

- Locate the files and gather them, for example, in a temporary directory.

When this is done, you can send the log files to DVS.

Sending the Information to DVS

Once all log files are gathered and available you may send them to DVS. If you have retrieved more than one file, it is best to pack them into an archive file (e.g. **.zip*):

- Pack the log files in an archive file (e.g. **.zip*).
- Next locate the archive file and send it to the e-mail address provided by the DVS personnel.

Once your mail is received, the DVS support team will evaluate the information and, if possible, provide you with a solution for your problem.

Appendix

This chapter provides further information about the Spycer application. First some advice is given to resolve irregularities that may occur when using Spycer. After that it lists the file formats supported and some interesting files and folders installed or created by Spycer.

A.1 Troubleshooting

The table below lists some errors that may occur during the operation of Spycer and details how to resolve them:

Error	Cause	Solution
A contents area of the browse and search tools does not show the desired material.	The required data is not stored in the selected directory.	Move, copy or capture the required data to this directory.
	The selective view combo box is set to a selective view.	Set the selective view combo box to the kind of data that you want to display or to `All Files` (see section "The Status Bar" on page 4-9).
	Some files (e.g. *.mov) require the installation of third-party programs.	Install the third-party program (see section "System Requirements" on page 1-8) such as the QuickTime player.
A network system is visible but provides no data.	The appropriate permissions are not given.	The system takes part in the SpycerNet as well as performs a local content management but browse and search permissions are not given. Allow at least a browsing and searching on the system (see section "The Group 'Permissions'" on page 8-11).
No network systems are displayed in the directory tree of a browsing pane.	The network/system combo box is set to display the drives/directories of the local system only.	Set the network/system combo box to `Network` (see section "The Directory Tree" on page 4-3).
	There are no other Spycers running in the network.	Either start or install Spycer on another system connected to your network and configure it for the SpycerNet accordingly (see section "Getting Started" on page 3-1).
	The local Spycer is configured to localhost only.	With Spycer running alter the network configuration settings from localhost (127.0.0.1) to the IP address of the network connection that is connected to the network (see section "The Group 'General'" on page 8-5).
	Some network ports are closed. May be the cause when no local drives are displayed as well.	The following network ports have to be open to connect successfully to the SpycerNet: Port 9960 UDP, Port 9961 TCP, Port 9970 UDP, Port 9971 TCP. Set these as exceptions in your firewall settings otherwise Spycer will be confined to its localhost only (IP address 127.0.0.1 has to be used).

Error	Cause	Solution
No systems/folders are displayed in the directory trees of the browsing panes at all.	Spycer is configured to localhost and the local content management is disabled.	With Spycer running alter the network configuration settings from localhost (127.0.0.1) to the IP address of the network connection that is connected to the network and/or enable the local content management (see section "The Group 'General'" on page 8-5).
	The SpycerAgent is not running.	Either close and afterwards re-start the user interface of Spycer, or use the SpycerAgent script/tool to get the background process started (see section "The SpycerAgent Script/Tool" on page 8-22).
	Some network ports are closed.	The following network ports have to be open to connect successfully to the SpycerNet: Port 9960 UDP, Port 9961 TCP, Port 9970 UDP, Port 9971 TCP. Set these as exceptions in your firewall settings otherwise Spycer will be confined to its localhost only (IP address 127.0.0.1 has to be used).
Spycer runs as Spycer Basic although a dongle is connected	Your license was available for evaluation reasons only and has expired.	Get a new non-expiring license from DVS (see section "License Issues" on page 2-10).
	The dongle has been plugged in after the user interface was started.	See section "How to Connect the Dongle to a Running Computer" on page 2-11.
You receive an error message when copying (moving) data	You tried a copying between different systems in the network.	For copy procedures the Spycer application running on the foreign system must be set to the appropriate access rights (read permissions). Otherwise a copy process will not be possible. Set the access permissions of the Spycer application on the other system appropriately.
	You tried to copy/move data to a specially secured location (e.g. on an SNFS storage).	Access to storage locations may be restricted. To enable accesses of the SpycerAgent to these locations you have to enter the administrative access permissions via the **ADVANCED...** button available in the watch folder configuration settings (see section "The Group 'Watch Folders'" on page 8-13).

To troubleshoot license issues the **'About Spycer'** window provides further details about the license currently assigned to your application (see section "About" on page 8-20).

A.2 Supported File Formats

Spycer supports over 100 graphic and image file formats. Most are made available by a special library. For a list of all these file formats see `http://perso.orange.fr/pierre.g/xnview/enformats.html`.

The tables in the following list the file formats that are supported by Spycer directly. They are listed according to their file types: First the video file formats are detailed, then the audio file formats and last but not least a list of all other file formats supported by Spycer is given.

To be displayed in Spycer some file formats, such as the **.mov* file format, may require the installation of third-party programs (e.g. the QuickTime player, see section "System Requirements" on page 1-8).

Table A-1: Supported video file formats

Format Name	Default Extension	File storage format	Description
BMP	**.bmp*	3 × 8 bit RGB	Windows bitmap format. Only uncompressed bitmaps are supported (no RLE compression).
Cineon	**.cin*	3 × 10 bit RGB	10 bit RGB format. Subset of the ANSI/SMPTE DPX file format. Flexible file format by Kodak, allowing for variable image headers.
DPX	**.dpx*	3 × 8 bit RGB	8 bit RGB file format. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 10 bit RGB	10 bit RGB file format. SMPTE Standard File Format for digital moving-picture exchange.
		10 bit YUV422	10 bit YUV file format. SMPTE Standard File Format for digital moving-picture exchange.
		3 × 12 bit RGB	12 bit RGB file format. SMPTE Standard File Format for digital moving-picture exchange.
		4 × 16 bit RGBA	16 bit RGB file format with key. SMPTE Standard File Format for digital moving-picture exchange.
JPEG	**.jpg* **.jpeg*	3 × 8 bit RGB	8 bit RGB file format of the Joint Photographic Experts Group. Images are usually stored with lossy compression.

Table A-1: Supported video file formats (cont.)

Format Name	Default Extension	File storage format	Description
JPEG2000	*.jp2	3 × 12 bit RGB	12 bit RGB file format. Flexible data and still image compression standard operating either compressed or uncompressed.
		3 × 16 bit RGB	16 bit RGB file format. Flexible data and still image compression standard operating either compressed or uncompressed.
		3 × 12 bit XYZ	12 bit XYZ file format. Flexible data and still image compression standard operating either compressed or uncompressed.
QuickTime	*.mov	various (e.g. RGB or YUV either compressed or uncompressed + audio)	Video file format that supports various file storage formats, either compressed or uncompressed. The whole video clip as well as audio are stored in one file only (container format). Proprietary streaming video technology developed by Apple.
SGI	*.sgi *.rgb	3 × 8 bit RGB	8 bit RGB file format. SGI IRIX image format.
		3 × 16 bit RGB	16 bit RGB file format. SGI IRIX image format.
TGA	*.tga	3 × 8 bit RGB and 4 × 8 bit RGBA, uncompressed	Targa image format.
TIFF	*.tif *.tiff	3 × 8 bit RGB and 4 × 8 bit RGBA	TIFF or Tagged Image File Format in 8 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported by DVS.
		3 × 16 bit RGB and 4 × 16 bit RGBA	TIFF or Tagged Image File Format in 16 bit RGB with or without key. Highly flexible and platform-independent image format. Not all variants of this format are supported by DVS.

Table A-1: Supported video file formats (cont.)

Format Name	Default Extension	File storage format	Description
yuv	*.qnt *.qtl *.yuv *.yuv8	8 bit YUV422 and YUVA4224	Raw 8 bit YUV422 and YUVA4224 format.[1] This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Component order UYVY.
	*.yuv10	10 bit YUV422 and YUVA4224	Raw 10 bit YUV422 and YUVA4224 format. This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Component order UYVY. Bits are packed tightly from left to right for three component samples, then two bits of padding (zero) to fill up to four bytes. The lines are padded to a multiple of four bytes. The file is padded to a multiple of 512 bytes.
	*.yuv16	16 bit YUV422	Raw 16 bit YUV422 format.[2] This file has no header. The image format is recognized by the file size. This is done with a table of predefined file sizes. Each component is stored as a 16 bit value in big-endian byte order (left-aligned). Component order UYVY.

1) 8 bit YUV422 and YUVA4224: 8 bit per component, 16 bit average per pixel
2) 16 bit YUV422 and YUVA4224: 16 bit per component, 32 bit average per pixel

Table A-2: Supported audio file formats

Format Name	Default Extension	Description
aif aiff	*.aif *.aiff	Audio interchange format. Platform-independent file format for sound. Capable of storing multiple mono or stereo channels.
BWF	*.rf64	Broadcast wave format. Platform-independent file format for sound. Extension of the *.wav format capable of storing multiple mono or stereo channels and enabling file sizes of more than 4 GB.
RIFF wave	*.wav	'Resource Interchange File Format' (RIFF) for digital audio (waveform) data under Windows. Capable of storing multiple mono or stereo channels.

Table A-3: Other supported file formats

Format Name	Default Extension	Description
Project file of DVS video systems	*.cp	DVS proprietary XML file format detailing all features of a timeline created with the CLIPSTER and the Pronto2K.2 / ProntoHD.2 video system software.

A.3 Keyboard Shortcuts

For a more easy control of Spycer there are various keyboard shortcuts available which are listed in the table below:

Action	Key Action
Refresh the view of the directory tree (must have focus)	[F5]
Switch to the search tool of Spycer	[Ctrl + F] (*Mac:* [⌘ + F])
Play of video clip in preview area	[Space], [5]
Stop of video clip in preview area	[Space]
Step one (1) frame forward on a scrub bar (must have focus)	[Right Arrow], [4]
Step one (1) frame backward on a scrub bar (must have focus)	[Left Arrow], [3]
Step ten (10) frames forward on a scrub bar (must have focus)	[2]
Step ten (10) frames backward on a scrub bar (must have focus)	[1]
Select several items (e.g. files) disjointedly	Hold [Ctrl] key (*Mac:* [⌘]) while selecting with the mouse
Select a range of adjoining items (e.g. files)	Hold [Shift] key while selecting with the mouse
Within the home system: Move material to another location instead of copying	Hold [Alt] key while drag and drop with the mouse
Copy selected material to the clipboard	[Ctrl + C] (*Mac:* [⌘ + C])
Paste from clipboard to the selected position/location	[Ctrl + V] (*Mac:* [⌘ + V])
Delete directories/files from the storage	[Del]
Close an open window of the Spycer application	*Linux/Windows only:* [Alt + F4]
Exit Spycer	[Alt + F4] (*Mac:* [⌘ + Q])
Open the configuration settings	*Mac only:* [⌘ + ,]
Minimize	*Mac only:* [⌘ + M]
Open the online help	[F1] (*Mac:* [⌘ + Shift + ?])

A.4 Interesting Files and Folders

The Spycer application is programed with the best know-how DVS has to offer in the field of digital video. It provides some files and folders that may be of interest to the user and/or the system administrator:

Leave the rest of the files in the directories mentioned in the following as they are. Do not try to run them if they are executables or even delete them. This may cause harm to your computer system and/or the Spycer application installed.

Folder(s):	*log*	
Location:	*Linux:*	*/var/opt/DVS/Spycer/log* and */home/<user>/.DVS/Spycer/log*
	Mac:	*/Library/Application Support/DVS/Spycer/log* and */Users/<user>/Library/Application Support/DVS/Spycer/log*
	Windows:	*C:\Documents and Settings\All Users\Application Data\DVS\Spycer\log* and *C:\Documents and Settings\<user>\Application Data\DVS\Spycer\log*
Condition:	By default available.	
Details:	These folders store the log files created by the Spycer application (see section “Gathering Diagnostic Information” on page 8-26).	

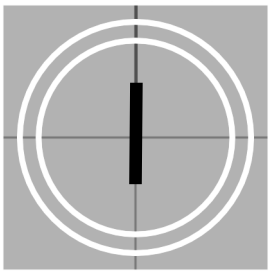
Folder(s):	*proxies*	
Location:	*Linux:*	*/home/<user>/.DVS/Spycer/proxies*
	Mac:	*/Users/<user>/Library/Application Support/DVS/Spycer/proxies*
	Windows:	*C:\Documents and Settings\<user>\Application Data\DVS\Spycer\proxies*
Condition:	Will be created after the first download of a proxy over the SpycerNet.	
Details:	This folder stores temporarily the proxies that were used for a preview when a clip from a foreign system is singled out (see section "General Information about Proxies" on page 5-4).	

File(s):	*Agent.cdb* and *Agent.cdb.bak* (backup file)	
Location when logged in as admin (root):	*Linux:*	*/var/opt/DVS/Spycer*
	Mac:	*/Library/Application Support/DVS/Spycer*
	Windows:	*C:\Documents and Settings\All Users\Application Data\DVS\Spycer*
Location when logged in as user:	*Linux:*	*/home/<user>/.DVS/Spycer*
	Mac:	*/Users/<user>/Library/Application Support/DVS/Spycer*
	Windows:	*C:\Documents and Settings\<user>\Application Data\DVS\Spycer*
Condition:	Will be created when the local content management is enabled.	
Details:	The database administered by the SpycerAgent and its backup file. Can be deleted. However, then any virtually added metadata will be lost and the SpycerAgent will have to scan the watched folders again which may take some time and render the system busy. To initiate a new scan you may have to stop and start the SpycerAgent.	

File(s):	*Agent.conf*, *IP.conf*, *Service.conf*	
Location:	*Linux:*	*/var/opt/DVS/Spycer*
	Mac:	*/Library/Application Support/DVS/Spycer*
	Windows:	*C:\Documents and Settings\All Users\Application Data\DVS\Spycer*
Condition:	Will be created when the local content management is enabled.	
Details:	Configuration files of the SpycerAgent. Do not delete. *Linux/Mac only:* By restricting access to the files *IP.conf* and *Service.conf* to 'read only' you can deny other users the possibility to alter the IP or service/daemon configurations.	

File(s):	*SearchItems.xml*	
Location when logged in as admin (root):	*Linux:*	*/var/opt/DVS/Spycer*
	Mac:	*/Library/Application Support/DVS/Spycer*
	Windows:	*C:\Documents and Settings\All Users\Application Data\DVS\Spycer*
Location when logged in as user:	*Linux:*	*/home/<user>/.DVS/Spycer*
	Mac:	*/Users/<user>/Library/Application Support/DVS/Spycer*
	Windows:	*C:\Documents and Settings\<user>\Application Data\DVS\Spycer*
Condition:	By default available.	
Details:	Contains the parameters for a search in the search tool of the Spycer application. You may adapt it, for example, to change the sequence of search parameters in the drop-down list of the very first combo box. Do not alter this file any further. Otherwise the search tool may not operate correctly anymore.	

File(s):	*BrowserCore.data*, *BrowserGui.data*	
Location:	*Linux:*	*/home/<user>/.DVS/Spycer*
	Mac:	*/Users/<user>/Library/Application Support/DVS/Spycer*
	Windows:	*C:\Documents and Settings\<user>\Application Data\DVS\Spycer*
Condition:	Will be created after the first closing of the user interface.	
Details:	These files store the layout of the user interface. They can be deleted without harm. However, then the program will start with a default layout. They will be created again when the program is exited.	



Index

A

AND search 4-18
application (open with) 4-10
audio 6-6
  file formats A-6
  icon of clip 4-7
  metadata 6-6, 8-3
  multiple channels 4-7
  text information view 4-7
  thumbnail of clip 4-7
automatic defragmentation 8-9
automatic proxy generation 5-5, 8-9

B

background process 2-5, 3-11, 8-22
bin 3-19
binary multiples 8-3
browse and search area 3-17, 4-1
  context menu 4-9
  fragmentation degree 7-4
browse and search permission . 2-9, 3-14
browse tool 4-2
  icons 4-4
  usage 4-13
browsing pane 4-2
  contents area 4-6
  context menu 4-9
  context menu (drag'n'drop) 4-14
  status bar 4-9
  thumbnail of still image 4-8
  thumbnail of video clip 4-7
busy 4-4, 4-9
button
  Add 3-13, 8-13
  Advanced 8-7
  Browse 4-2, 4-13
  Cancel 6-4
  Cancel selected 7-13
  Content 3-18
  Defrag 6-6
  Deselect all 8-12
  Edit 6-3, 6-10, 6-11
  end of clip 5-7
  Exclude Folder 3-12, 8-15
  File 6-3, 6-5, 6-10
  Find 4-16
  Find it! 4-19, 4-21
  frame backward 5-7
  frame forward 5-7
  Header Data 6-3, 6-10
  Image 4-9
  Include Folder 3-12, 8-14
  Job List 7-12
  Load 4-18
  Metadata 6-1
  new directory 4-5
  one directory up 4-5
  Pause selected 7-13
  play 5-7
  Production 6-3, 6-11
  Refresh 3-10, 8-6
  Refresh list 7-13
  Remove 3-13, 8-13, 8-15
  Rename 6-6, 7-2
  Reset 4-18, 8-5
  Resume selected 7-13
  Save 4-19, 6-4, 6-11
  Select all 8-12
  start of clip 5-7
  Text 4-9

C

C notation 4-18, 6-11, 7-9
calculator 7-10, 8-19
cancel job 7-13

central server 2-7
central storage 2-8
chapter overview 1-3
client station 1-1, 2-7
clip
audio 4-7, 6-6
convert 4-12, 7-8
looped preview 5-7
metadata 6-6, 8-3
open with 4-10
play 5-7
play original data 5-6
preview 5-4
properties 8-3
proxy 5-4
show in browser 4-10
video 4-7, 6-6
codec 7-9
CodeMeter 8-25
control center 8-25
installation 3-2
web server 8-25
colors (fragmentation degree) 7-6
compatibility to older versions 2-8
configuration 3-9, 8-4, 8-18
general settings 3-9, 8-5
integrated Spycer 3-20
jobs 8-8
network 8-5
network drives 8-10
overview 8-4
proxy 5-5, 8-8
remote access permissions 8-11
sequence files 3-13, 8-13
watch folders 3-11, 8-13
confirmation of settings 8-5
container format 5-5, 7-8, 8-9
content management 2-7
disable 8-7
enable 3-10, 8-7
contents area 4-6, 4-20
configuring view 4-12
selective viewing 4-9
show folders 4-12
context menu
after drag and drop 4-14
browse and search area 4-9
of video overlay 5-6
control center 8-25
controls
directory 4-5
preview area 5-6
search 4-18
conventions
of screenshots 1-5
of user guide 1-4
conversion 4-12, 7-8
copy 4-11, 4-13
and SpycerAgent 2-6
automatic defragmentation 8-9
tool 7-7
create proxy 4-12, 5-5
automatically 5-5, 8-9

D

daemon 2-5, 8-22
data types 4-7, 6-6
database 2-5, 3-11, A-10
default application (open with) 4-10
defragmentation 4-12
and SpycerAgent 2-6
automatic 8-9
of unknown files 7-6
SNFS 7-4, 7-7
start 7-6
defragmenter 7-4
delete 4-11, 4-15
diagnostic information 8-26
Digital Intermediate 2-2
directory
see also folder
controls 4-5
delete 4-11
hide unwatched folders 4-12
icon 4-4
new 4-5, 4-11
one folder up 4-5
properties 4-13, 8-3
state 4-5
thumbnail 4-8
tree 4-3
view in contents area 4-12
view in directory tree 4-12
disable local content management 8-7
distributed 2-7
dongle 1-7, 2-10
(DVS-)SAN 2-10
CodeMeter 3-2, 8-25
floating license 2-13
information 8-21
serial number 8-21
SpycerAgent 2-10
update 2-12

download of proxy 2-9, 3-14, 5-7
drive
icon 4-4
properties 8-3
thumbnail 4-8
DVS service department 8-26
DVS-SAN 1-6

E

edit metadata 6-3, 6-10
permission 2-9, 3-14
Edit Tool 1-1
enable local content management . 3-10, 8-7
essence 3-15
exiting the program 3-23, 8-18
integrated Spycer 3-21
expiration date and time (license) ... 8-21

F

features of variants 1-7
file
delete 4-11
extension 7-2, 7-3
header 6-6
metadata 6-5, 8-3
open with 4-10
properties 4-13, 8-3
show in browser 4-10
types 4-7, 6-6
file format A-4
audio A-6
container 5-5, 7-8, 8-9
conversion 4-12, 7-8
graphic A-4
other A-7
video 3-13, 8-13, A-4
file format converter 4-12, 7-8
file manager (open with) 4-10
file metadata view 6-3, 6-5
fragmentation degree 7-5
firewall 2-8
floating license 2-13
license server 2-14
folder
see also directory
move to 4-11
structure 4-3
foreign system 4-4
proxy 5-5, 5-7
fragmentation 7-6
colors 7-6
frame backward 5-7
frame forward 5-7
frame number 4-18, 7-2
free disk space 8-3
fullscreen mode 8-17

G

general settings 3-9
generic timecode 6-7
group list 8-5

H

header data view 6-3, 6-6
home system 4-4

I

icon 4-4
audio clip 4-7
directory 4-4
drives 4-4
project file 4-8
still image 4-8
systems 4-4
unknown file 4-8
video clip 4-7
image
see still image
image sequence 7-2, 7-4
as video 3-13, 8-13
indexed folders 2-5, 2-6
information (diagnostic) 8-26
initial setup 3-9
finish 3-15
installation 3-2
under Linux 3-2
under Mac 3-4
under Windows 3-5
instructions
copy 4-13
delete files/directories 4-15
exiting program 3-23
gathering diagnostic info 8-26
installation under Linux 3-2
installation under Mac 3-4
installation under Windows 3-5
move 4-14
previewing clips 5-2, 5-4

previewing images 5-4
search 4-20
starting of integrated Spycer 3-18
starting under Linux 3-7
starting under Mac 3-7
starting under Windows 3-8
integrated Spycer 1-6, 3-18
configuration 3-20
usage 3-19
IP address 3-10, 8-6
not available 3-10, 8-6

J

job list 3-17, 7-12
cancel job 7-13
pause job 7-13
progress bar 7-12
refresh list 7-13
resume job 7-13
start pending 7-13

K

key chain for Spycer 2-11, 3-2, 3-4, 3-5
key features of Spycer 2-2
keycode 6-6, 6-7, 6-10

L

layout of user interface 3-22, 8-19
hide unwatched folders 4-12
hide/turn off areas 3-22
license 2-10
CodeMeter 3-2, 8-25
dongle 2-10
expiration date and time 8-21
floating license 2-13
information 8-21
license server 2-14
management 8-19
Spycer Basic 2-11, 2-13
SpycerAgent 2-10
troubleshooting 8-21
update 2-12
local reading 2-6, 3-11
localhost address 3-10, 8-6
log file 3-7, 3-23, 8-26
log-in 2-6
looped preview 5-7

M

maintenance 8-22
media player 2-2
menu bar 3-16, 8-16
on Mac 8-16
metadata 6-1, 8-3
display 6-2
edit 6-3, 6-10
file 6-5
header data 6-6
production 6-8
show 4-10, 5-8, 6-2
metadata area 3-17, 6-1
fragmentation degree 7-4
minimizing the user interface 8-18
mounted (mapped) network drives .8-10
move 4-14
automatic defragmentation 8-9
to folder 4-11
multiple channels (audio) 4-7

N

network 4-4
see also SpycerNet
connection 3-9
disable 3-10, 8-6
drive 8-10
network configuration 8-5
network connection 3-10, 8-6
network drive 2-6, 3-11
ports 2-8, 3-10
workload 2-8
new directory 4-5, 4-11
NTFS 4-4

O

online 4-9
open with 4-10
operating system 1-8
other file formats A-7
overview
browsing pane 4-2
configuration 8-4
integrated Spycer 3-18
of chapters 1-3
user interface 3-16

P

password 8-10
paste 4-11
path 4-6
pause job 7-13
pending job 7-13
permissions 3-14, 8-11
  browse and search 2-9, 3-14
  edit metadata 2-9, 3-14
  proxy 3-14, 5-5
  read 2-9, 3-15
  write 2-9, 3-15
pixel aspect ratio 7-9
playing of clip 5-7
  start 5-7
  stop 5-7
ports in the network 2-8, 3-10
post production 2-2, 2-7
prefix 7-2, 7-3
preview area 3-17, 5-4
  controls 5-6
  proxy 5-4
  proxy status 5-7
preview controls 5-6
production metadata view 6-3, 6-8
program exit 3-23, 8-18
  integrated Spycer 3-21
program start 3-7
  integrated Spycer 3-18
  under Linux 3-7
  under Mac 3-7
  under Windows 3-8
progress bar 7-12
project file 6-6
  icon 4-8
  metadata 6-6, 8-3
  text information view 4-8
  thumbnail 4-8
properties 4-13, 8-2
  clips 8-3
  directories 8-3
  files 8-3
  systems 8-2
  volumes 8-3
proxy 1-6, 2-2, 5-4
  configuration 5-5, 8-8
  create 4-12, 5-5
  create automatically 5-5, 8-9
  download 2-9, 3-14, 5-7
  file settings 5-5, 8-8
  from foreign system 5-5
  over SpycerNet 5-5
  permissions 3-14, 5-5
  play original data 5-6
  reload 5-6
  status 5-7
  storage location 8-8

R

read permission 2-9, 3-15
recording time 7-10, 8-3
refresh 4-11
  job list 7-13
remote access permissions 3-14, 8-11
remote control 2-9
rename 4-11
renaming tool 4-11, 7-2
rescan 4-11
results area 4-16, 4-19
resume job 7-13
rights management 2-8

S

safety margin 8-3
SAN 2-8
  dongle 2-10
save as text 4-10
  search 4-21
scalable 2-7
scaling quality 7-9, 8-9
scanning 1-6, 2-5, 2-8, 3-15, 4-11, 7-12
screenshots 1-5
script (SpycerAgent) 8-22
scrub bar 2-2
  cursor 5-7
  preview area 5-4, 5-6, 6-3, 6-7
  thumbnail 4-7, 5-2
search controls 4-18
search location 4-17
search parameter area 4-16
search parameters 4-17
search tool 4-16
  contents area 4-20
  save search as text 4-21
  show in browser 4-21
  usage 4-20
segmentation 7-6
select all 4-10
selective viewing 4-9
sequence files 3-13, 8-13

serial number of dongle 8-21
server 2-7
service 2-5, 8-22
settings confirmation 8-5
settings pane 8-5
setup 3-9
shortcuts A-8
show
folders in contents area 4-12
in browser 4-10
metadata 4-10, 5-8, 6-2
singling out data 6-2
SNFS 1-2, 1-6, 4-4
defragmentation 7-4, 7-7
software structure 2-4
source timecode 6-6, 6-7, 6-10
Spycer 1-1, 1-6, 2-2
communication processes 2-4
compatibility to older versions 2-8
configuration 8-4
in this user guide 1-5, 1-7
initial setup 3-9
installation 3-2
integrated 1-6, 3-18
key chain 2-11, 3-2, 3-4, 3-5
key features 2-2
license 2-10
maintenance 8-22
new in this version 1-9
software structure 2-4
SpycerBox 1-6
system requirements 1-8
upgrade 2-11
user interface 2-5
variants 1-6
version number 8-21
web sites 2-11
Spycer Basic 1-6
license 2-11, 2-13
Spycer for DVS-SAN 1-6
SpycerAgent 2-5
copy 2-6
defragmentation 2-6
dongle 2-10
license 2-10
script/tool 8-22
status 8-6, 8-23, 8-25
watch folders . 2-5, 3-11, 8-5, 8-13
SpycerBox 1-6
SpycerNet 1-1, 2-3, 2-6, 2-7
disable 3-10, 8-6
IP address 3-10, 8-6
networking 2-8
proxies 5-5
watch folders 2-6, 3-11, 8-5
workload 2-8
starting a pending job 7-13
starting of play 5-7
starting of program 3-7
integrated Spycer 3-18
under Linux 3-7
under Mac 3-7
under Windows 3-8
state
included folders 8-14
of the drives/directories 4-5
of the system 4-4, 4-9
SpycerAgent 8-6, 8-23, 8-25
watch folders 8-15
status bar 4-9
still image 6-6
as video 3-13, 8-13
convert 4-12, 7-8
icon 4-8
metadata 6-6
preview 5-4
text information view 4-8
thumbnail of image 4-8, 5-2
stopping of play 5-7
storage capacity 8-3
storage details 8-3
storage space 7-10, 8-3
system
foreign 4-4
home 4-4
icon 4-4
properties 8-2
state 4-4, 4-9
thumbnail 4-8
system requirements 1-8

T

target group 1-4
task bar 3-20
text information view 4-6, 4-9
audio clip 4-7
fragmentation degree 7-5
project file 4-8
still image 4-8
unknown file 4-8
video clip 4-7
text save 4-10
search 4-21

thumbnail
audio clip 4-7
directory 4-8
drive 4-8
project file 4-8
still image 4-8, 5-2
systems 4-8
unknown file 4-8
video clip 4-7, 5-2
thumbnail view 4-6, 4-9, 5-2
fragmentation degree 7-5
time 8-3
tool 8-18
calculator 7-10, 8-19
copy 7-7
defragmenter 7-4
file format converter 4-12, 7-8
license management 8-19
renaming 4-11, 7-2
SpycerAgent 8-23
total disk space 8-3
tree structure 4-3
troubleshooting A-2
license information 8-21
typographical conventions 1-4

U

unknown file
defragmentation 7-6
icon 4-8
text information view 4-8
thumbnail 4-8
USB port 2-10
used disk space 8-3
user interface 2-5
hide unwatched folders 4-12
hide/turn off areas 3-22
layout change 3-22, 8-19
minimize 8-18
overview 3-16
user name 8-11

V

variants 1-6
features 1-7
video 6-6
convert 4-12, 7-8
file formats 3-13, 8-13, A-4
icon of clip 4-7
looped preview 5-7
metadata 6-6, 8-3
play 5-7
play original data 5-6
preview 5-4
properties 8-3
proxy 5-4
text information view 4-7
thumbnail of clip 4-7, 5-2
video format 7-10
video overlay 5-5
video raster 8-3
view
file metadata 6-3, 6-5
header data 6-3, 6-6
items in contents area 4-12
items in directory tree 4-12
production metadata 6-3, 6-8
selective 4-9
text information 4-6, 4-9
thumbnail 4-6, 4-9, 5-2
volume
icon 4-4
properties 8-3
thumbnail 4-8

W

watch folders 2-5, 3-11, 8-13
exclude 3-12, 8-15
include 3-12, 8-14
web server 8-25
workload (network) 2-8
write permission 2-9, 3-15